Modernage Public School & College, Pakistan
Homework for Winter Break
Grade VIII, Session 2024-25

Dear Parents and Students,

As we approach the close of another fruitful academic session, it's heartening to reflect on the growth, dedication, and achievements of our students. With each passing term, they have demonstrated resilience and a passion for learning. We are especially excited for our students moving from **Grade VIII to Board (Grade IX)** — a significant milestone that marks the beginning of a more focused and structured academic journey. To support this important transition, we have prepared **winter homework assignments** aimed at reinforcing core concepts and giving students an early grasp of the content they will encounter in **Grade IX**. Completing the homework will offer students a head start in key topics, making it easier for them to keep pace with the curriculum.

Highlights of the Winter Homework

📃 **Purpose:** The homework is designed to strengthen essential skills, provide an introduction to Grade IX content, and develop independent learning and critical thinking abilities.

📃 **Advance Learning:** For students advancing to **Grade IX**, the assignments include key concepts from Grade IX, allowing them to familiarize themselves with the new syllabus and reduce learning gaps. Revise and practice the content you studied in Grade VIII for a better understanding.

🕰️ **Balanced Approach:** While learning is crucial, so is relaxation. We encourage students to balance study with play, family time, and personal well-being.

📚 **Daily Reading:** Students are encouraged to maintain a daily reading habit, as it sharpens their language skills, improves concentration, and fuels creativity.

👨‍👩‍👦 **Parental Involvement:** We encourage parents to support their child's learning journey by guiding them in planning their daily study schedules and motivating them to complete their homework on time.

Winter Vacation Schedule

📅 School will remain closed from Saturday, 21st December 2024, to Sunday, 2nd March 2025.

📅 School will reopen on Monday, 3rd March 2025, In Sha Allah.

Homework Submission

📢 **All homework assignments must be submitted on Monday, 3rd March 2025.**

As we prepare to bid farewell to 2024, we extend our warmest wishes for a **Happy New Year 2025**. For your convenience, details of the winter homework are available on **www.maps.edu.pk**, the school portal, and the Modernage app. We look forward to an inspiring and successful academic journey ahead.

Warm regards,
Maryam Shah
Academic Coordinator

Note: Use loose sheets to complete the homework.

1. ENGLISH

Q.1.a. Choose whether the following nouns are concrete or abstract.

i. hate _____ ii. music _____ iii. peace_____ iv honey _____
v. noise_____ v. traffic_____.

b. Complete the following sentences by using the appropriate collective nouns.

i. My friend bought a _____ of roses for me.
ii. Can you pass the _____ of keys to me.
iii. A pack of _____ howled at night.
iv. The hunter carries a _____ of arrows.
v. Do you know about the _____ of this movie.

c. Underline the noun phrases.

i. All the children went to the park yesterday
ii. Two of the puppies were adopted.
iii. The quick brown fox jumped over the fence.

Q.2.a Use appropriate personal pronouns to fill the blanks.

i. Murat is a good boy. __ always listens to__ teacher.
ii. Amit and Sumit are twin brothers. ___ take the same bag to school.
iii. Milly and I are very good friends. ___ have known each other since childhood.
iv. The mangoes are very sour. Where did you buy ___?
v. I love watching Tom and Jerry. __ reminds me of my childhood days.

b. Use the correct indefinite pronouns to fill the blanks.

i. There is _____ in the bathroom at the moment.
ii. I am bored, there isn't _____ to do here.
iii. I can't find my keys _____.
iv. _____ at the party had a great time.
v. Are there _____ lemons? No, there are _____.

Q.3 Use the correct article.

i. I want ____ apple from that basket.
ii. ____ church on the corner is progressive.
iii. Miss Lin speaks ____ Chinese.
iv. I borrowed ____ pencil from your pile of pencils and pens.
v. One of the students said, "____ professor is late today."

Q.4.a Fill in the blanks with correct form of verb.

i. We _____ (are waiting/is waiting) for Rohan.
ii. These books _____ (belong/belongs) to me.
iii. She _____ (want/wants) to go.
iv. We _____ (will like/would like) to visit the museum.
v. He _____ (has finished/have finished) talking.

b. Identify whether the following verbs are regular or irregular. Write your answer next to each verb.

i. walk _____
ii. become _____
iii. jump _____
iv. speak _____
v. flex _____

c. For each of the following sentences, choose the correct order of adjectives to fill in the blanks.

i. My grandmother lives in the _____ house on the corner. a) little blue, green and white. b) little, blue and green and white c). little, blue, green, and white
ii. The store carries an assortment of _____ objects. a). interesting new, old and antique b). new, old, interesting and antique c). interesting, old and new and antique
iii. We went for a two-week cruise on an _____ ocean liner. a). incredible brand-new, huge Italian b). incredible, huge, brand-new Italian c). Italian incredible, brand-new, huge

d. Underline the adverbs from the sentences given below and also state their type.

i. The boy is too careless. _____
ii. The winds are very strong. _____
iii. The baby slept soundly. _____
iv. The soldiers fought the war valiantly. _____
v. Joey always tries his best. _____
vi. Surely you are mistaken. _____
vii. The movie is to end soon. _____
viii. Your friend messaged again. _____
ix. I did my homework already. _____
x. I was rather busy. _____

Q.5.a Use the correct prepositions to fill in the blanks.

i. He lives _____ Ahmedabad.
ii. They prefer to stay _____ a farmhouse.
iii. The rat ran ____ the hole.
iv. They go to university _____ walk.
v. It is advisable to stay inside _____ the hurricanes.
vi. The kids fought _____ themselves
vii. Everyone cheered _____ Reema _____ her success.

viii.The instructor insisted _____ completing the drawing before leaving the class.
ix. They are not familiar _____ this subject.
x. He is very angry _____ us.

b. State whether the following sentences are simple, complex or compound.

i. I did not know that this food was meant only for the staff. _____ .
ii. She is innocent, so she has appealed to the court. _____ .
iii. If you are not ready with the song, it is better to let them know. _____ .
iv. She will come home or I will stay back at her place. _____ .
v. In the evening, I am going to the park. _____ .
vi. The sun looks amazing today. _____ .
vii. I remember the day that we met very well. _____ .
viii. Nithi is not keeping well, yet she decided to go to work. _____ .
ix. After they reach the hotel, they will inform us. _____ .
x. We are going to the park. _____ .

c. State whether the following sentences are declarative, imperative, interrogative or exclamatory.

i. Please shut the windows and doors. _____
ii. Do you like chocolate pastries? _____
iii. My name is Astrid Gracy. _____
iv. Where are you going? _____
v. Such a beautiful place! _____
vi. Go and try this new flavor. _____
vii. Today is Monday. _____

Q.6 Develop a story with the help of the given outlines.

……. an old king……three sons……. worried about their quarrel……. a bundle of sticks……..all fail to break…….untie the bundle…… break all the sticks. Moral_____

Q.7 Write a letter to your best friend informing him about your winter vacations activities.

Q.8 Write an application to your principal asking him to arrange sports camp in winter vacations.

Q.9 Read the passage carefully and answer the questions.

Yahya was working in a factory as a daily wager. He lived near the factory. His wife was an uneducated rural woman. His eldest son was working in another city and often came to meet his family. The youngest son was reading in a nearby school with his sister. Yahya's wife was well aware about her husband's low income and had a very good control over daily expenses. She tried to keep away her husband from timely glitches at home. They were spending a contented life.

Questions:

i. Suggest a suitable title to the passage.
ii. Write the main idea of the passage in your own words.
iii. How many family members are there in Yahya's family?
iv. What is meant by the underlined word in the passage?
v. Give your own opinion about Yahya's wife in one sentence.

Q.10 Read the stanza carefully and answer the questions given at the end.

Continuous as the stars that shine
And twinkle on the Milky Way,
They stretched in never-ending line
Along the margin of a bay:
Ten thousand saw I at a glance,
Tossing their heads in sprightly dance.

Questions:

i. What is the main idea of the stanza?
ii. Pick out an example of personification from the stanza.
iii. Write down the contextual meaning of the phrase **never-ending line**.
iv. Identify at least two pronouns in the stanza?

2). مضمون:اردو

تحریری کام

سوال نمبر1۔ تشبیہ اور استعارہ کی تعریف لکھیں اور اراکین کی وضاحت کریں۔ پانچ پانچ مثالیں تحریر کرکے اراکین کی نشاندہی کریں۔

سوال نمبر2۔ جملہ فعلیہ اور جملہ اسمیہ کی تعریف لکھیں اور تین تین مثالیں دیتے ہوئے اجزاء کی وضاحت کریں۔

سوال نمبر3۔ سبق "حجِ اکبر" کا مرکزی خیال اپنے الفاظ میں تحریر کریں۔

سوال نمبر4۔ مرکبِ اضافی اور مرکبِ عطفی کی تعریف بیان کرتے ہوئے مثالوں کی مدد سے اِن مرکبات کے اجزاء کی وضاحت کریں۔

سوال نمبر5۔ "مطالعہ کتب کے زندگی پر اثرات" کے عنوان پر دو دوستوں کے درمیان مکالمہ تحریر کریں۔

سوال نمبر6۔ اپنے دوست کو خط لکھیں اور جماعتِ نہم کے لیے مضامین کے انتخاب پر رہنمائی کریں۔

سوال نمبر7۔ محاورہ، ضرب المثل اور روزمرہ کی تعریف لکھیں۔ ہر اک جز کی پانچ پانچ مثالیں دیتے ہوئے اپنے جملوں میں استعمال کریں۔

سوال نمبر8۔ موسمِ سرما کی تعطیلات میں اپنی روزمرہ سرگرمیوں پر تفصیلی مضمون لکھیں۔

عملی تحریری کام

سوال نمبر9۔ نمرہ احمد کے ناول "مُصحف (Mushaf)" کا تفصیلی مطالعہ کرکے اِس پر اپنی ذاتی رائے تحریر کریں۔

سوال نمبر10۔ اپنی ایک ماہ کی سرگرمیوں، ذاتی مشاہدات اور واقعات کو ذاتی روزنامچے (پرسنل ڈائری) میں تحریر کریں۔

3. PAKISTAN STUDIES

سوال نمبر1: درست جواب کا انتخاب کریں۔

۱۔ نظریہ ——— سوچ ہے۔ الف) اجتماعی ب) انفرادی ج) معاشرتی د) معاشی

۲۔ ——— کسی قوم کے افراد کو متحد رکھنے میں اہم کردار ادا کرتا ہے۔ الف) یکجہتی ب) قومیت ج) نظریہ د) سیاست

۳۔ نظریہ ——— اقسام کا ہوتا ہے۔ الف) 2 ب) 3 ج) 4 د) 5

۴۔ جنوبی ایشیاء کے مسلمانوں کی زندگی کا محور ——— ہے۔ الف) ثقافت ب) اسلام ج) سیاست د) جمہوریت

۵۔ ——— میں ہندوؤں نے اردو زبان کی مخالفت کی۔ الف) 1865 ب) 1866 ج) 1867 د) 1868

۶۔ نہرو رپورٹ ——— میں پیش کی گئی۔ الف) 1927 ب) 1928 ج) 1929 د) 1930

۷۔ اسلامی ریاست ——— کے اصولوں پر قائم ہوتی ہے۔ الف) جمہوریت ب) بادشاہت ج) آمریت د) معاشرت

۸۔ قائداعظم نے 11 اگست 1947 کو ——— سے خطاب کیا۔ الف) دستور ساز اسمبلی ب) کانگرس ج) مسلم لی د) بلوچستان شاہی دربار

۹۔ شملہ وفد کے دوران مسلمان راہنماؤں نے وائسرائے لارڈ ——— سے ملاقات کی۔ الف) منٹو ب) کرزن ج) ماونٹ بیٹن د) لارنس

۱۰۔ مسلم لیگ کا قیام ——— میں ہوا۔ الف) 1905 ب) 1906 ج) 1907 د) 1908

۱۱۔ انگریز ——— کی غرض سے برصغیر میں داخل ہوئے۔ الف) تجارت ب) سیاست ج) سیاحت د) حکمرانی

۱۲۔ 1937 کے انتخابات میں کانگرس نے ——— صوبوں میں حکومت قائم کی۔ الف) 11 ب) 10 ج) 9 د) 8

۱۳۔ ——— ہندوؤں اور مسلمانوں کے باہمی اختلافات انگریز حکومت کی موجودگی میں حل کرنا چاہتے تھے۔ الف) قائداعظم ب) گاندھی ج) چکرورتی د) کرپس

۱۴۔ سی-آر-فارمولا کے ——— اہم نکات تھے۔ الف) 2 ب) 3 ج) 4 د) 5

۱۵۔ ہندوستان ——— کے تحت تقسیم ہوا۔ الف) کابینہ مشن ب) 3 جون منصوبہ ج) کرپس مشن د) نہرو رپورٹ

۱۶۔ قرارداد لاہور ——— نے پیش کی۔ الف) علامہ اقبال ب) قائداعظم ج) سرسید احمد خاند د) مولوی فضل الحق

۱۷۔ دوسری جنگ عظیم کا آغاز ——— میں ہوا۔ الف) 1939 ب) 1944 ج) 1920 د) 1945

۱۸۔ انتظامی کونسل کی تشکیل ——— کا مقصد تھا۔ الف) شملہ وفد ب) شملہ کانفرنس ج) کرپس مشن د) کابینہ مشن

۱۹۔ شملہ کانفرنس ——— کے باہمی اختلافات کی وجہ سے ناکام ہوئی۔ الف) کانگرس ب) مسلم لیگ ج) انگریزوں د) مسلمانوں

۲۰۔ 1946 کے منتخب نمائندوں کے اجلاس میں ——— ممبران نے شرکت کی۔ الف) 400 ب) 500 ج) 600 د) 700

۲۱۔ 3 وزیروں پر مشتمل مشن ——— میں ہندوستان پہنچا۔ الف) 1943 ب) 1944 ج) 1945 د) 1946

۲۲۔ 1867 میں ——— کا واقعہ پیش آیا۔ الف) تنسیخ بنگال ب) اردو ہندی تنازعہ ج) تقسیم بنگال د) میثاق لکھنو

۲۳۔ سی-آر-فارمولہ ——— رہنما نے پیش کیا۔ الف) مسلمان ب) انگریز ج) ہندو د) سکھ

۲۴۔ قائداعظم نے ——— میں مسلم لیگ میں شرکت کی۔ الف) 1906 ب) 1907 ج) 1912 د) 1913

۲۵۔ 16 اگست 1946 کو ——— نے یوم راست اقدام منایا۔ الف) مسلمانوں ب) ہندوؤں ج) انگریزوں د) اقلیتوں

۲۶۔ عبوری حکومت میں مسلم لیگ کے ——— نمائندے شامل تھے۔ الف) 5 ب) 6 ج) 7 د) 8

۲۷۔ قائداعظم کے 14 نکات ——— کا ردعمل تھا۔ الف) میثاق لکھنو ب) نہرو رپورٹ ج) کرپس مشن د) گاندھی جناح مذاکرات

۲۸۔ 25 جون 1946 کو مسلم لیگ نے ——— میں شامل ہونے کا فیصلہ کیا۔ الف) گروپ الف ب) گروپ ب ج) گروپ ج د) عبوری حکومت

۲۹۔ مسلمانوں نے لارڈ منٹو سے ——— مطالبہ کیا تھا۔ الف) جداگانہ انتخابات ب) الگ وطن ج) آزادی د) تقسیم ہند

۳۰۔ ہندوستان کے آخری وائسرائے ——— تھے۔ ا الف) لارڈ ایٹلی ب) لارڈ ویول ج) لارڈ ماونٹ بیٹن د) لارڈ کرزن

۳۱۔ سیاچن گلیشیر کی لمبائی ——— کلومیٹر ہے۔ الف) 58 ب) 68 ج) 72 د) 78

۳۲۔ پاکستان کا ـــــــــ خطہ زیادہ گنجان آباد ہے۔ الف) میدانی ب) صحرائی ج) ساحلی د) پہاڑی

۳۳۔ آب وہوا کے لحاظ سے پاکستان کے ـــــــــ خطے ہیں۔ الف) 6، ب) 7، ج) 8، د) 9

۳۴۔ خیبر پختونخوا آب وہوا کے لحاظ سے ـــــــــ خطے میں شامل ہے۔ ا الف) بلند پہاڑی، ب) مرطوب پہاڑی، ج) نیم خشک پہاڑی، د) ساحلی

۳۵۔ مرطوب پہاڑی خطوں میں بارشیں ـــــــــ ہوتی ہیں۔ الف) کم، ب) زیادہ، ج) معتدل، د) نہیں

۳۶۔ دریائے سندھ کی لمبائی ـــــــــ کلومیٹر ہے۔ الف) 2600، ب) 2700، ج) 2800، د) 2900

۳۷۔ ـــــــــ جنگلات کے درختوں کی لمبائی 3 سے 6 میٹر ہوتی ہے۔ لف) بلند پہاڑی، ب) ساحلی، ج) لگائے گئے، د) خشک جھاڑی دار

۳۸۔ پاکستان کے ـــــــــ فیصد رقبے پر جنگلات ہیں۔ الف) 4.8، ب) 5.8، ج) 6.8، د) 7.8

۳۹۔ ـــــــــ خطے میں پاکستان کی اہم بندرگاہیں ہیں۔ الف) پہاڑی، ب) میدانی، ج) ساحلی، د) صحرائی

۴۰۔ پاکستان کو طبعی لحاظ سے ـــــــــ حصوں میں تقسیم کیا جاسکتا ہے۔ الف) 4، ب) 5، ج) 6، د) 7

۴۱۔ کے-ٹو ـــــــــ پہاڑی سلسلے میں موجود ہے۔ الف) ہمالیہ، ب) ہندوکش، ج) قراقرم، د) وزیرستان

۴۲۔ جھیل ہامون مشخیل ـــــــــ میں واقع ہے۔ الف) بلوچستان، ب) سندھ، ج) کے پی کے، د) پنجاب

۴۳۔ پاکستان کی کل لمبائی ـــــــــ کلومیٹر ہے۔ الف) 1200، ب) 1400، ج) 1600، د) 1800

۴۴۔ ـــــــــ علاقے معدنیات کی دولت سے مالا مال ہیں۔ الف) سطح مرتفع، ب) میدان، ج) ریگستان، د) ساحل

۴۵۔ پاکستان ـــــــــ ایشیا میں موجود ہے۔ الف) شمالی، ب) مغربی، ج) مشرقی، د) جنوبی

۴۶۔ واخان کی پٹی پاکستان کو ـــــــــ سے جدا کرتی ہے۔ الف) تاجکستان، ب) ترکمانستان، ج) قازقستان، د) کرغستان

۴۷۔ پاکستان کی سب سے بڑی سرحد 2250 کلومیٹر ـــــــــ ملک کے ساتھ ہے۔ الف (چین، ب (بھارت، ج (ایران، د (افغانستان

۴۸۔ پاکستان کے شمال میں ـــــــــ واقع ہیں۔ الف) پہاڑ، ب) میدان، ج) صحرا، د) ساحل

۴۹۔ پاکستان کے جس گلیشئر کی لمبائی 62 کلومیٹر ہے۔ الف (باتورہ، ب (بالتورو، ج (سیاچن، د (بیافو

۵۰۔ پاکستان میں پرندوں کی ـــــــــ اقسام پائی جاتی ہیں۔ الف) 350، ب) 450، ج) 550، د) 650

سوال نمبر 2: درج ذیل سوالات کے مختصر جوابات لکھیں۔

۱۔ جمہوریت سے کیا مراد ہے اور اس کی اہمیت بیان کریں۔

۲۔ دو قومی نظریہ اور مسلم لیگ کے ارتقاء پر روشنی ڈالیں۔

۳۔ تقسیم ہندوستان کس منصوبے کے تحت ہوئی؟ اصول واضح کریں۔

۴۔ پاکستان کا محل وقوع اور جغرافیائی اہمیت بیان کریں۔

۵۔ پاکستان سیاحت کے لیے کس طرح اہمیت رکھتا ہے؟

Question No 1: Choose the best answer.

1. Ideology is a _____ thinking. A) collective B) individual C) social D) economic.
2. _____ plays an important role in the integration of a nation.
   A) unity B) nationality C) ideology D) politics
3. Ideology has _____ types. A)2 B3) C)4 D)5
4. Center of life of Muslims of the subcontinent was _____.
   A) culture B) Islam C) politics D) Democracy
5. Hindus conflicted the Urdu language in _____. A)1865 B)1866 C)1867 D)1868
6. Nehru report was presented in _____. A)1927 B)1928 C)1929 D)1930

7. Islamic state is created on _____ principles. A) democratic B) kingship C) dictatorship D) social
8. Quaid-e-Azam addressed _____ on 11 August 1947. A) constituent assembly B) congress C) Muslim league D) Baluchistan Shahi Darbar
9. Muslim leaders meet lord_____ during Shimla deputation. A) Minto B) Curzon C) Mountbatten D) Lawrance
10. Muslim league was created in _____. A) 1905 B)1906 C)1907 D)1908
11. Britishers entered the subcontinent for _____ purpose. A) trade B) politics C) tourism D) rule
12. In the elections of 1937, congress established their government in _____ provinces. A) 11 B)10 C)9 D)8
13. _____ was willing to resolve personal clashes between Hindus and Muslims in the presence of the British government. A) Quaid-e-Azam B) Gandhi C) Chakarwarti D) Cripps
14. There were _____ points of C.R Formula. A)2 B)3 C)4 D)5
15. Subcontinent was divided according to _____. A) cabinet mission B) 3rd June plan C) Cripps mission D) Nehru report
16. Lahore resolution was presented by _____.A) Allama Iqbal B) Quaid-e-Azam C) Sir Syed Ahmed D) Molvi Fazal-ul-Haq
17. Second world war was started in _____. A) 1939 B) 1944 C) 1920 D) 1945
18. The creation of an executive council was the objective of _____. A) Shimla deputation B) Shimla conference C) Cripps mission D) Cabinet mission
19. Shimla conference failed due to personal clashes of _____. A) Congress B) Muslim league C) Britishers D) Muslims
20. _____ members participated in the 1946 session of elected representatives. A)400 B) 500 C) 600 D) 700
21. Mission including 3 ministers reached subcontinent in _____.A) 1943 B) 1944 C) 1945 D) 1946
22. In 1867_____ incident occurred. A) cancelation of the division of Bengal B) Urdu Hindi conflict C) division of Bengal D) Lakhnow pact
23. C.R Formula was presented by _____ leader. A) Muslim B) British C) Hindu D) Sikh
24. Quaid-e-Azam joined Muslim League in _____. A) 1906 B) 1907 C) 1912 D) 1913
25. On 16 August 1946, _____ celebrated as "Direct Action Day" A) Muslims B) Hindus C) Britishers D) Minorities
26. _____ members of the Muslim League were part of the interim government. A) 5 B) 6 C) 7 D) 8
27. Quaid-e-Azam presented his 14 points in the reaction of _____.
A) Lucknow pact B) Nehru report C) Cripps mission D) Gandhi Jinnah talks
28. On 25 June 1946, the Muslim league decided to join _____. A) Group A B) Group B C) Group C D) Interim government
29. Muslim League demanded _____ from Lord Minto. A) separate electorate B) separate homeland C) independence D) division of India
30. _____ was the last viceroy of India. A) Lord Italy B) Lord Wavell C) Lord Mountbatten D) Lord Curzon
31. Length of Siachen Glacier is _____ km. A) 58 B) 68 C) 72 D) 78

32. _____ area of Pakistan is densely populated. A) Plain B) Desert C) Coastal D) Mountainous
33. According to Climate Pakistan has _____ regions. A) 6, B) 7, C) 8, D) 9
34. According to climate, KPK is located in _____ region. A) high mountains, B) humid mountains, C) semi-dry mountains, D) coastal
35. There are _____ rains in humid mountainous regions.A) less, B) heavy, C) moderate, D) no
36. The total length of river Indus is _____ km. A) 2600, B) 2700, C) 2800, D) 2900
37. Trees of _____ forests have lengths of 3 to 6 meters. A) high mountains, B) coastal, C) dry shrubs
38. _____percent land of Pakistan is covered with forests. A) 4.8, B) 5.8, C) 6.8, D) 7.8
39. Important ports of Pakistan are located in _____ region. A) mountainous, B) plain, C) coastal, D) desert
40. Pakistan is physically divided into _____ parts. A) 4, B) 5, C) 6, D) 7
41. K-2 is located in _____ mountainous range. A) Himalaya, B) Hindukush, C) Karakorum, D) Waziristan
42. Lake Hamoon Mashkhail is located in _____. A) Baluchistan, B) Sindh, C) KPK, D) Punjab
43. Total length of Pakistan is _____ kilometer. A) 1200, B) 1400, C) 1600, D) 1800
44. _____ areas are rich in minerals. A) plateaus, B) plains, C) deserts, D) coastal
45. Pakistan is located in _____ Asia. A) north, B) west, C) east, D) south
46. Wakhan separates Pakistan from _____. A) Tajikistan, B) Turkmenistan, C) Kazakhstan, D) Kirghizstan
47. Pakistan shares 2250 km largest border with _____ state. A) China, B) India, C) Iran, D) Afghanistan
48. _____ is situated in the north of Pakistan. A) mountains, B) plains, C) deserts, D) coastal
49. The glacier of Pakistan which is 62 km long is_____. A) Batoora, B) Baltoro, C) Siachen, D) Biafo
50. _____ types of birds are found in Pakistan. A) 350, B) 450, C) 550, D) 650

QUESTIONS:

1. What is meant by democracy? Explain its importance.
2. Explain the evolution of two nation theory and the creation of Muslim League.
3. According to which plan subcontinent was divided? Explain principles.
4. Explain the location and geographical importance of Pakistan.
5. Explain how Pakistan is important for tourism.

4. ISLAMIYAT & MUTALA)E-QURAN HAKEEM

سوال نمبر1۔ کتاب اسلامیات لازمی سے حدیث نمبر8،7،6کا ترجمہ اور تشریح لکھیں۔

سوال نمبر2۔ موضوعاتی مطالعہ سے سبق طہارت وصفائی کے مشقی سوالات کے جوابات تحریر کریں۔

سوال نمبر3۔ سورۃ الانفال آیات49تا58پڑھیں اور مشقی سوالات کے جوابات تحریر کریں۔

سوال نمبر4۔ سورۃ الانفال آیات45تا48کا ترجمہ پڑھیں اور مشقی سوالات کے جوابات تحریر کریں۔

سوال نمبر5۔ سورۃ الانفال آیات59تا75تک کے مشکل الفاظ کے معنی لکھیں۔

سوال نمبر6۔ سورۃ النحل پڑھیں اور پہلے رکوع کی روشنی میں قرآنِ مجید سے ہدایت حاصل کرنے والوں کی چار صفات تحریر کریں۔

سوال نمبر 7۔ سورۃ النحل پڑھیں اور پانچویں رکوع میں اللہ تعالیٰ کی جن صفات کا ذکر ہے ان میں سے دس تحریر کریں۔

سوال نمبر 8۔ قصہ حضرت سلیمان علیہ السلام کو مختصر تحریر کریں۔

سوال نمبر 9۔۔ سورۃ العنکبوت آیات 40 تا 50 کا ترجمہ اور تشریح لکھیں۔

سوال نمبر 10۔ سورۃ القمان پڑھیں اور حضرت لقمان نے اپنے بیٹے کو جو وصیتیں کیں ان میں سے دس تحریر کریں۔

5. BIOLOGY

Choose one of the following:

1. The quantitative study of the energy relationships and energy conversion in biological systems is known as
a) energetics b) bioenergetics c) respiration d) metabolism
2. The main source of energy for the whole universe is _____
a) sunlight b) artificial light c) moon light d) none of these
3. When chemical bonds are broken energy is _____
a) released b) stored c) nor gain nor loss d) remain unchanged
4. Plants capture sunlight and convert into stored _____ energy.
a) physical b) chemical c) heat d) light
5. Oxidation is defined as _____
a) Loss of electrons b) loss of hydrogen c) gain of electron d) gain of hydrogen
6. Gain of hydrogen or electron is called _____
a) oxidation b) reduction c) bioenergetics d) oxidation-reduction
7. The process of breakdown of food is known as _____
a) photosynthesis b) respiration c) oxidation d) breathing
8. Capacity to do work is called _____
a) power b) force c) work d) energy
9. The energy currency for cell is known as _____
a) ATP b) NAD^+ c) AMP d) ADP
10. ATP means _____
a) adenine triphosphate b) adenine monophosphate c) adenosine triphosphate d) adenosine triplophosphate
11. Hydrolysis of one ATP produces _____ Kcal.
a) 7.3 b) 8 c) 4.2 d) 17
12. Adenine is a
a) nitrogenous base b) sugar c) fatty acid d) vitamin
13. Adenine is bonded to 5-carbon sugar by means of _____ bond.
a) ionic b) covalent c) hydrogen d) polar covalent
14. Adenine combines with sugar to form _____
a) adenosine b) adicose c) adipose d) adenocine
15. Bonding of one phosphate with adenosine gives _____
a) adenosine monophosphate b) adenosine diphosphate c) adenosine triphosphate d) adenine phosphate
16. Photosynthesis is derived from two _____ words.
a) Greek b) Latin c) Spanish d) German
17. Process by which plant use CO_2, in the presence of sunlight and chlorophyll is known as
a) respiration b) photosynthesis c) transpiration d) transport

18. Chlorophyll is a complex _____ compound.
a) inorganic b) organic c) bioelement d) both b & c
19. Chlorophyll absorb blue and _____ portion of sun light.
a) green b) yellow c) red d) indigo
20. Plants look green because they reflect _____ portion of sun light.
a) green b) yellow c) red d) indigo
21. Chlorophyll is present in _____ plastids of plants.
a) chromoplast b) chloroplast c) leucoplast d) none of these
22. Chloroplast is a _____ membrane organelle.
a) single b) triple c) double d) none of these
23. A granum consists of many flattened fluid filled membranous sacs called _____
a) stroma b) lamella c) intergrana d) thylakoid
24. Thylakoid membranes are the sites of _____ reaction of photosynthesis.
a) light b) dark c) black d) hydrolysis.
25. Light reaction occur in the _____ of chloroplast.
a) grana b) stroma c) thylakoid d) matrix
26. _____ reaction occurs in the stroma of chloroplast.
a) dark b) light c) oxidation d) reduction
27. Chlorophyll is attached to the _____.
a) granum b) thylakoid membrane c) intergrana d) stroma
28. Photosynthetic prokaryotes lack _____.
a) mitochondria b) golgi bodies c) chloroplasts d) vacuole
29. Chlorophyll ___ is the most abundant and most important photosynthetic pigment.
a) b b) c c) d d) a
30. Chlorophyll ___ is found in green algae.
a) b b) c c) a d) d
31. Bacteria contain _____ chlorophyll.
a) algal b) bacterio c) geen d) none of these
32. Light is a form of _____.
a) particles b) energy c) power d) both b & c
33. Light consist of beam of particles of different frequencies called _____
a) particles b) photons c) energy d) Both a & b
34. Frequencies of visible light ranges from
a) 390-430 b) 550-670 c) 400-750 d) 400-650
35. Photosynthetic pigments are of ___ types.
a) three b) four c) two d) five
36. _____ are known as accessory phosynthetic pigments.
a) chlorophyll b) carotenoids c) cytochrome d) chloroplast
37. Carotenoids absorb light in the visible spectrum ranges from _____
a) 390-430 b) 500-600 c) 400-750 d) 400-650
38. Ganum consists of _____ type of photo systems.
a) four b) five c) two d) three
39. Oxygen, ATP and _____ are the products of light reaction of photosynthesis.
a) NAD^+ b) $NADP^+$ c) FAD^+ d) NADPH
40. Dark or light independent reaction does not require _____.
a) light b) CO_2 c) ATP d) NADPH
41. Dark reaction occurs in _____ form.
a) chain b) straight reaction c) cyclic d) both a & c

42. Dark reaction is also known as _____ cycle.
a) Kreb's b) Calvin c) Henry's d) Fisher's
43. _____ are small openings in the lower epidermis of leaf.
a) stoma b) guard cells c) intercellular spaces d) both a & b
44. Each stomata is guarded by two kidney shape guard cells called _____
a) stoma b) guard cells c) intercellular spaces d) both a & b
45. Which one of the following is not required for photosynthesis?
a) water b) carbon-dioxide c) sunlight d) oxygen
46. The concept of limiting factor was derived by _____ law of limiting factor.
a) Lebig's b) Darwin's c) Aristotle d) Linnaeus
47. According to law of limiting factor when a chemical reaction is controlled by one or more than one factor, then the rate of chemical reaction will be limited by the factor which is in _____ amount.
a) maximum b) minimum c) optimum d) both a & b
48. Amount of carbon-dioxide in atmosphere is
a) 0.04% b) 0.03% c) 0.003% d) 0.05%
49. closing of stomata occur due to the decreased level of _____ in the mesophyll tissue.
a) H_2O b) CO c) CO_2 d) H_2O_2
50. The optimum condition for photosynthesis is___.
a) 20^oC b) 25^oC c) 35^oC d) 45^oC
51. Oxidation reduction process during which organic food is broken down and energy is released is known as _____
a) photosynthesis b) respiration c) bioenergetics d) reduction
52. Type of respiration which occurs in the presence of oxygen is known as _____
a) aerobic b) anaerobic c) fermentation d) both b & c
53. Anaerobic respiration occurs in the absence of _____.
a) water b) CO_2 c) Nitrogen d) oxygen
54. Fermentation of glucose to lactic acid produce_____ ATP's.
a) 36 b) 8 c) 2 d) 38
55. In the first step of fermentation glucose is broken down into _____
a) pyruvic acid b) acetaldehyde c) alchol d) lactic acid
56. The chemical formula of pyruvic acid is
a) $C_2 H_4 O_6$ b) $C_3 H_4 N_4$ c) $C_3 H_4 O_3$ d) $C_6 H_8 O_6$
57. Alcholic fermentation is done by yeast and some kinds of _____.
a) animals b) fungi c) bacteria d) viruses
58. Production of yogurt is an example of _____ fermentation.
a) lactic acid b) alcholic c) bacterial d) none of these
59. Aerobic respiration completes in _____ steps.
a) one b) two c) three d) four
60. Glycolysis occurs in _____.
a) mitochondria b) cytoplasm c) mitochondrial matrix d) cytosol
61. Kreb's cycle and electron transport chain occur in the _____.
a) mitochondria b) cytoplasm c) cytosol d) mitochondrial
62. Glycolysis means break down of glucose into_____.
a) pyruvic acid b) alchol c) carbon-dioxide d) sugar
63. Glucose is a _____ carbon compound and pyruvic acid is _____ carbon compound.
a) 6 & 3 b) 5 & 3 c) 7 & 5 d) 3 & 6
64. Pyruvic acid breaks down completly into carbon dioxide and water in _____ .
a) glycolysis b) kreb's cycle c) electron transport chain d) photosynthesis

65. Total amount of energy produced during aerobic respiration is
a) 38 ATP b) 35 ATP c) 32 ATP d)36 ATP
66. Photosynthesis takes place _____.
a) in all cells of plant body b) in green cells of the plant body c) only in leaf cells
d) in root cells
67. Which one of the following is true for photosynthesis?
a) occur during day time b) occurs day and night c) occurs in root cells d) catabolic process
68. Which one of the following is not required for respiration?
a) oxygen b) food molecule c) enzymes d) CO_2
69. ATP is a
a) nucleotide b) nitrogenous base c) an enzyme d) carbohydrate
70. A living cell respire
a) for exchange of gases b) to store energy c) to increase in size d) to release energy
71. A car engine uses fuel for work to do. To carry out functions, a living cell uses
a) electric power b) generator c) ATP d) heat energy
71. _____ contains the most amount of essential nutrients.
a) water b) air c) soil d) temperature
72. Metabolic activities of plants are linked with the availability of_____.
a) chemicals b) nutrients c) food d) both a& c
73. Which one of the following is not the component of organic compounds?
a) carbon b) hydrogen c) oxygen d) cobalt
74. Which element act as cofactor and helps in cell permeability?
a) calcium b) hydrogen c) phosphorus d) magnesium
75. Which of the following is a part of chlorophyll molecule and coenzyme a?
a) sulphur b) calcium c) magnesium d) carbon
76. Which one of the following is not a micronutrient?
a) boron b) sodium c) potassium d) none of these
77. _____ is maintains for osmotic and ionic balance?
a) zinc b) cobalt c) sodium d) nitrogen
78. Which of the following element plays the role of nitrogen fixation?
a) carbon b) molybdenum c) iron d) boron
79. There are _____ major amino acids present in living bodies.
a) 10 b) 20 c) 30 d) 40
80. Plants lacking_____ appear chlorotic, yellowing between veins of older leaves?
a) ca^{2+} b) mg^{2+} c) k^{+} d) na^{+}
81. _____ is a condition in which leaves produce insufficient chlorophyll?
a) tracking b) chlorosis c) both a& b d) none of these
82. Fertilizers are of how many types?
a) two b) three c) four d) five
83. Which one of the following is not an organic compound?
a) ammonium nitrate b) manure c) seaweed d) sewage
84. _____ are the major source of energy.
a) proteins b) fats c) carbohydrates d) vitamins
85. In all carbohydrates the ratio of hydrogen atoms to oxygen atoms is?
a) 1:1 b) 1:2 c) 2:1 d) 2:2
86. If a gram of carbohydrate is fully oxidized it produce about_____ kilojoules of energy.
a) 15 b) 16 c) 17 d) 18

87. _____ contains the information about the formation of proteins?
a) heart b) dna c) amino acid d) endoplasmic reticulum
88. Fats belong to group called_____.
a) lipids b) proteins c) carbohydrates d) vitamins
89. _____ play an important role in controlling inflammation, blood clotting, and brain development.
a) fats b)carbohydrates c) proteins d) vitamins
90. Vitamins are of _____ types.
a) two b) three c) four d) five
91. Which of the following is not a fat soluble vitamin?
a) a b) k c) d d) b
92. Vitamin ____ is known as retinol.
a) d b) a c) c d) k
93. Deficiency of vitamin____ affects the health of skin, hair, eyes and immune system.
a) a b) d c) k d) b
94. Vitamin_____ is essential for healing wounds, and for repairing and maintaining bones and teeth?
a) a b) c c) k d) b
95. _____ is a mineral that helps maintain good teeth and bones.
a) phosphorus b) calcium c) carbon d) sodium
96. About _____% of the body's calcium is stored in bone tissue.
a) 66 b) 77 c) 88 d) 99
97. Low iron levels can cause _____.
a) anemia b) osteoporosis c) osteomalacia d) scurvy
98. Human body is about_____% water.
a) 60 b) 70 c) 80 d) 90
99. Human body has _____% protein.
a) 15 b) 25 c) 35 d) 45
100. Digestive tract utilizes_____ liters of water per day.
a) 10 b) 20 c) 30 d) 40
101. What is the percentage of protein in peas?
a) 5.1% b) 5.2% c) 6.1% d) 6.2%
102. What is the percentage of carbohydrate in bread?
a) 32% b) 42% c) 52% d) 62%
103. What is the percentage of fat in banana?
a) 0.5% b) 1.5% c) 2.5% d) 3.5%
104. What is the percentage of carbohydrate in fish?
a) 0% b) 10% c) 20 d) 30
105. _____ is an asymptomatic condition in which the loss of minerals can cause the body's bones to become porous and fragile.
a) cancer b) anemia c) osteoporosis d) goiter
106. Goiter is a disease which is caused by the deficiencies of _____.
a) calcium b) iodine c) carbon d) sodium
107. Soya beans are used as a major source of_____ in many different forms.
a) carbohydrates b) protein c) lipids d) vitamins
108. A/an_____ diet contains carbohydrate, protein, fat, vitamins, mineral salts and fiber in correct proportions.
a) unbalanced b) balanced c) proportionate d) unhealthy

109. The conversion of large, complex, non diffusible and insoluble food into small, simple, diffusible and soluble form by the action of enzyme is called as_____.
a) respiration b) circulation c) digestion d) none of these
110. The uptake of soluble and diffusible food from digestive tract into cell or into blood is called_____.
a) transportation b) absorption c) assimilation d) egestion
111. The process in which cells absorb and convert nutrients into fluid or solid substance of the body is called_____.
a) assimilation b) digestion c) absorption d) transportation
112. _____ is the elimination or removal of undigested food or feaces.
a) digestion b) egestion c) transpiration d) assimilation
113. _____ is the first part of body which receives food we eat.
a) stomach b) esophagus c) pharynx d) buccal cavity
114. How many pairs of salivary glands are present in oral cavity?
a) two b) three c) four d) five
115. Esophagus is _____ inches long.
a) 10 b) 20 c) 30 d) 40
116. Stomach is _____cm long?
a) 30.3 b) 30.4 c) 30.5 d) 30.6
117. The innermost layer of stomach is called_____.
a) serosa b) mucosa c) submucosa d) muscle layer
118. If a drop of oil is broken into smaller components, and these components are broken to such an extent that they are easily soluble in water, the process would be called
a) digestion b) egestion c) emulsification d) assimilation
119. Pancreas is_____ in color.
a) yellow b) green c) brown d) blue
120. _____ emerges out from caecum.
a) pancreas b) appendix c) gall bladder d) rectum
121. _____ is a disorder of digestive system that reduces the frequency of bowel movement.
a) diarrhea b) constipation c) ulcer d) vomit
122. _____ can cause dehydration.
a) ulcer b) diarrhea c) constipation d) none of these
123. Ulcers that are formed in stomach are called_____.
a) gastric ulcer b) gastrointestinal ulcer c)both a& b d) none of these
124. A plant that has started growth exhibits chlorosis of the leaves of the entire plant. the chlorosis is probably due to a deficiency of which of the following macronutrients?
a) carbon b) oxygen c) nitrogen d) calcium
125. All of the following are elements that plants need in very small amounts (micronutrients) except
a) hydrogen b) iron c) chlorine d) copper
126. Most plant acquire their nitrogen mainly in the form of
a) nh_3 b) nh_4 c) cn_2h_2 d) no_3
127. Poor eating habits can cause the following diseases
a) diabetes b) heart attack c) stroke d) mumps
128. Which substance, present in soil, is used by plants to make proteins?
a) carbon dioxideb) oxygen c) nitrates d) vitamins
129. Which of the following does not manufacture digestive juice?
a) liver b) kidneys c) stomach d) pancreas

130. What is removed from the undigested food when it is in the large intestine?
   a) water b) nutrients c) energy d) sugar
131. The structure of the alimentary canal wall has 4 layers, from deep to superficial, they are
   a) mucosa, submucosa, serosa, muscularis layer
   b) mucosa, submucosa, muscularis layer, serosa
   c) mucosa, muscularis layer, submucosa, serosa
   d) mucosa, serosa, muscularis layer, submucosa
132. The sphincter that serves as a valve between the stomach and small intestine is
   a) cardiac sphincter b) pyloric sphincter c) glossopharyngeal sphincter
   d) intestinal sphincter
133. The function of liver is to
   a) metabolize carbohydrates, lipids and proteins b) filtration of blood c) detoxification of chemicals d) all of the above
134. Some of the functions of proteins include
   a) provide energy b) serving as structural material c) act as enzyme
   d) all of these
136. The digestive enzyme secreted by gastric glands begins the digestion of
   a) carbohydrates b) protein c) fat d) vitamins
137. The gall bladder
   a) produces bile b) is attached to the pancreas
   c) stores and concentration bile d) produces secretin
138. which of the following is the not accurate definition of a balance diet?
   a) a balanced diet is one that consists of different types of food in different amounts.
   b) a balanced diet is one that is low in fats and high in carbohydrates.
   c) a balanced diet is one that consists of different types of food in correct proportions.
   d) a balanced diet is one that contains food from all the food groups in the pyramid.
139. what happens when food reaches the stomach?
   a) no digestion occurs in the stomach
   b) the food moves quickly into the small intestine.
   c) juices mix with the food and stomach muscles squeeze it.
   d) the food is completely digested and is absorbed by tiny blood vessels in the walls of the stomach.

QUESTIONS:

Q1: Write the composition of bile juice and pancreatic juice.

Q2: Illustrate the structure of energy rich molecule.

Q3: Explain the mechanism of light and dark reaction.

Q4: List down the sources and advantages of organic fertilizers.

Q5: Define respiration & Explain the steps of aerobic respiration.

6. PHYSICS

Choose one of the following:

1. Which one of the following is Smallest Quantity?
   a) 0.01 g b) 2 mg c) $100\mu g$ d- 5000 ng
2. The number of significant figures in 0.00580 Km is:-
   a) 1 b) 2 c) 3 d- 4
3. The unit of length in SI is called:-
   a) cm b) mm c) dm d- m
4. The study of Biological Sciences on the basic principles of Physics is called:-
   a) Bio Physics b) Plasma Physics c) Astro Physics d- Geo Physics
5. Least count of metre rod is:-
   a) 1 mm b) 0.1 mm c) 0.01 mm d- 1 cm
6. A ball is dropped from the top of the tower. The distance covered by it in one second will be:-
   a) 100 meter b) 10 meter c) 50 meter d- 5 meter
7. Force is a quantity:-
   a) Horizontal b) Vertical c) Scalar d- Vector
8. The rate of change of velocity is called:-
   a) Acceleration b) Distance c) Displacement d) Relative motion
9. If a body moves in an irregular manner, it is called:-
   a) rest b) Linear Motion c) Random Motion d) Circular Motion
10. _____ is a vector quantity:-
    a) Mass b) Speed c) Velocity d) Volume
11. The rolling friction is smaller than sliding friction about:-
    a) 10 times b) 100 times c) 5 times d) 4 times
12. A 2 Kg object is moving in a circle with a speed of $4ms^{-1}$. If the radius of the circle is 1m. The value of centripetal force acting on the object will be:-
    a) 8 N b) 16 N c) 32 N d) 64 N
13. SI- unit of momentum is:-
    a) Nm b) Ns c) NKg d) Nms^{-1}
14. Centripetal acceleration (a_c) represents as:-
    $a)\ \frac{mv^2}{r}$ b) $\frac{v^2}{r}$ c) $\frac{mv}{r^2}$ d) $\frac{v}{r}$
15. First condition of equilibrium is: -
    $a)\ \sum\tau = 0$ b) $\sum F = 0$ c) $\sum\frac{F_x}{F_y} = 0$ d) $\sum\frac{F_y}{F_x} = 0$
16. An example of neutral equilibrium is: -
    a) Football b) Block c) Pencil at its tip d) Book on table
17. The direction of force F with x-axis is given by: -
    $a)\ tan^{-1}\frac{Fy}{Fx}$ b) $tan^{-1}\frac{Fx}{Fy}$ c) $tan^{-1}\frac{F}{Fx}$ d) $tan^{-1}\frac{Fx}{F}$
18. In System International unit of Torque is: -
    a) N b) Nm c) Nm^{-1} d) NS
19. A body is in equilibrium when its: -
    a) Acceleration is uniform b) Speed and acceleration are uniform
    c) Speed is uniform d) Acceleration is non-uniform
    b) The orbital speed of a low orbit satellite is: -

a) Zero b) $8\ ms^{-1}$ c) $800\ ms^{-1}$ d) $8000ms^{-1}$

c) The value of 'g' on moon's surface is: -

$a)\ 1.7ms^{-2}$ b) $1.6\ ms^{-2}$ c) $10ms^{-2}$ d) $9.8ms^{-2}$

d) The value of 'g' at a height one Earth's radius above the surface of the Earth is: -

a) 2 g b) $\frac{1}{2}g$ c) $\frac{1}{3}g$ d) $\frac{1}{4}g$

e) The distance of Moon from Earth is nearly: -

a) 380000 Km b) 3800 Km c) 37000 Km d) 370000 Km

f) The value of gravitational acceleration on the surface of Moon is: -

$a)\ 3.7ms^{-2}$ b) $1.62\ ms^{-2}$ c) $10ms^{-2}$ d) $9.8ms^{-2}$

g) The energy stored in water dam is: -

a) Electrical energy b) Potential Energy c) Kinetic Energy d) Thermal Energy

h) If a force of 25 N pulls a stone thrown at a distance of 5 m in its direction. The magnitude of work will be: -

a) 125 J b) 100 J c) 50 J d) 150 J

i) An input of 500 joule has been provided to a machine. If the efficiency of this machine is 45% then output will be: -

a) 500 J b) 225 J c) 255 J d) 252 J

j) Energy due to motion of body is: -

a) Electric b) Chemical c) Kinetic d) Potential

k) The rate of doing work with respect to time is called: -

a) Power b) Work c) Energy d) Stress

l) Kinetic energy is directly proportional to the velocity of a body: -

a) Square b) Two times c) Three times d) Four times

NUMERICALS:

1. A car is moving with constant velocity of $100ms^{-1}$. Find its acceleration.
2. When a body possess a charge in momentum of 270NS during a change in time of 10s, find the magnitude of force.
3. Convert 120 watt into horse power (hp).
4. When speed of particle triples, by what factor does its kinetic energy increases?
5. How much work can 3 hp do in 1h?
6. Prove value of g at surface of moon is 4.63 ms.

7. CHEMISTRY

CHAPTER 1 FUNDAMENTALS OF CHEMISTY

Choose the correct answer for each of the following.

1. The alchemist tried to convert the base metal into:

(a) Mercury (b) iron (c) gold (d) copper

2. The branch of chemistry that deals with the laws and principles concerning changes in matter and energy is called:

(a) Organic chemistry (b) physical chemistry (c) biochemistry (d) copper

3. A pure substance that cannot be broken down into simpler substances by any physical or chemical means is called:

(a) element (b) compound (c) homogeneous mixture (d) heterogeneous mixture

4. Which of the following compound has both empirical and molecular formula identical?

(a) benzene(C_6H_6) (b) hydrogen peroxide(H_2O_2) (c) water(H_2O) (d) glucose($C_6H_{12}O_6$)

5. Which of the following elements is taken as standard for the determination of relative atomic masses of the elements.

(a) ${}_{92}U^{235}$ (b) ${}_{10}Ne^{20}$ (c) ${}_{8}O^{16}$ (d) ${}_{6}C^{12}$

6. The gram molecular mass of HNO_3 is _____

(a) 60 (b) 100 (c) 63 (d) 98

7. Which one of the following is a homogeneous mixture?

(a) smoke (b) air (c) fog (d) smog

8. Which one of the following group is comprised of the elements?

(a) Mercury, silica, brass (b) iodine, tin, iron (c) copper, aluminium, bronze (d) coal, smoke, fog

9. Which one of the following is a chemical property of a substance?

(a)solubility (b) density (c) melting point (d) corrosion

10. Which of the following can be broken down into simpler substances:

(a) ammonia (b) oxygen (c) sulphur (d) iron filling

11. Study of matter is called _____.

(a) Chemistry (b) Law (c) Science (d) Theory

12. Pre testing explanation given to a natural phenomenon is known as _____.

(a) Theory (b) Law (c) Hypothesis (d) Phenomenon

13. The tested & verified hypothesis is known as _____.

(a) Theory (b) Law (c) Hypothesis (d) Phenomenon

14. Some generalization related to a verified theory after a long time is known as.

(a) Theory (b) Law (c) Hypothesis (d) Phenomenon

15. At the developmental stages of Chemistry, ancient Arab chemists were known as _____.

(a) Scientists (b) Al-chemists (c) Chemists (d) Biologists

16. All the medicines & industrial products are the gifts of _____ Chemistry.

(a) Industrial (b) Physical (c) Inorganic (d) Organic

17. Avogadro's number of molecules is contained in one _____ of ammonia gas.

(a) Atoms (b) Mole (c) Grams (d) Kilograms

18.In chemical reactions reactants must undergo a _____ change in order to form new products.

(a) Physical (b) Chemical (c) Both a and b (d) None

19.One mole of nitrogen (N_2) contains _____ number of nitrogen atoms.

(a) Mole (b) Avogadro's (c) Empirical (d) Molecular

20. Empirical formula of a compound is also called its _____ formula.

(a) Molecular (b) Complex (c) Simple (d) None

21. Rusting of iron is a _____ change.

(a) Chemical (b) Physical (c) Both a and b (d) None

22. Empirical formula of benzene is _____.

(a) CH (b) C_2H (c) CHO (d) C_2H_2

23. In an element all the atoms have same _____.

(a) Electrons (b) Protons (c) Neutrons (d) Both a and b

24. Mass of 2.0 moles of H_2O is _____ g.

(a) 18 (b) 36 g (c) 35.5 (d) 36.5

25. The mass per unit volume is called _____.

(a) Volume (b) Mass (c) Melting point (d) Density

26. The formula which shows the simplest ratio between atoms present in a compound is called _____ formula.

(a) Molecular (b) Complex (c) Simple (d) Empirical

27. Number of particles in mole of a substance is called _____ number.
(a) Mole (b) Avogadro's (c) Empirical (d) Molecular
28. The sum of atomic masses of elements present in one molecule is called _____ mass.
(a) Atomic (b) Molecular (c) Formula unit (d) Empirical
29. Which of the following quantities of Chlorine contain one moles of chlorine gas?
(a) 71.0 g (b) 22g (c) 35.5g (d) 36.5 g
30. 0.5 mole of H_2O contains the number of molecules.
(a) 6.02×10^{23} (b) 3.01×10^{23} (c) 1.204×10^{23} (d) 4.01×10^{23}
31. The atomic mass of chlorine is
(a) 35.5 g (b) 71.6g (c) 37.7 g (d) 33.3g
32. Formula of Methane is _____.
(a) CH_4 (b) C_2H_2 (c) C_2H_6 (d) C_2H_4
33. Which of the following is a compound?
(a) Mercury (b) Air (c) Water (d) Smoke
34. The main aim of alchemist was to
(a) convert base metal in to gold (b) to produce iron
(c) to produce Fe (d) To produce salt
35. Anything which occupies space and has a mass is called
(a) metal (b) matter (c) alloy (d) mixture
The smallest particle of matter which cannot exist free in nature and cannot be further sub divided is known
(a) element (b) mixture (c) atom (d) ion
37. Pure matter is known as
(a) matter (b) substance (c) mixture (d) compound
38. A pure substance that cannot be broken down in to simpler substances by physical or chemical means is called
(a) element (b) mixture (c) atom (d) ion
39. A pure substance that is made up of two or more elements in definite proportion by mass is called
(a) matter (b) substance (c) mixture (d) compound
40. Combination of two or more substances in different proportion is called _____
(a) matter (b) substance (c) mixture (d) compound
41. The charge particle is called
(a) element (b) mixture (c) atom (d) ion
42. The species with unpaired electron is called
(a) element (b) mixture (c) atom (d) radical
43. The smallest particle of element or compound which can exist in free state & can be further decompose is
(a) radical (b) molecule (c) atom (d) ion
44. The branch of chemistry which deals with the study of all elements & their compounds except hydrocarbons & their derivatives is called _____ chemistry.
(a) Industrial (b) Physical (c) Inorganic (d) Organic
45. The branch of chemistry which deals with the qualitative & quantitative analysis of matter is called analytical chemistry is called _____ chemistry.
(a) Industrial (b) analytical (c) Inorganic (d) Organic
46. The branch of chemistry deals with the study of the changes occurring in the nuclei of atoms accompanied by the emission or absorption of radiations is called _____ chemistry.
(a) nuclear (b) Physical (c) Inorganic (d) Organic
47. The branch of chemistry deals with the techniques & chemical processes for the preparation of different industrial products like cement, glass, plastic, fertilizers, etc is called _____ chemistry.

(a) Industrial (b) Physical (c) Inorganic (d) Organic

48. The branch of chemistry which deal with the synthesis & decomposition of the compounds & their reactions on the living organisms, such as plants, animals & human being is called _____ chemistry.

(a) Industrial (b) bio (c) Inorganic (d) Organic

49. The branch of chemistry deals with the interaction of chemical processes with the environment & their interaction on it, such as air pollution & water pollution is called _____ chemistry.

(a) Industrial (b) Physical (c) environmental (d) Organic

50. The charge particle is called

(a) element (b) mixture (c) atom (d) ion

51. A pure substance which is a combination two or more elements in definite proportion by mass.

(a) element (b) mixture (c) atom (d) compound

52. The total number of proton present in the nucleus of atom is called _____number

(a) atomic (b) molecular (c) ionic (d) empirical

55. The total number of proton and neutron present in the nucleus of atom is called _____number

(a) atomic (b) molecular (c) ionic (d) mass

56. The mass of elements are determined by comparing them with a mass of standard atom that is $_{6}^{12}C$ is called _____atomic mass

(a) absolute (b) relative (c) average (d) mean

57. The quantity one twelfth (1/12) of the mass of an atom C_12 is called one atomic mass unit is

(a) bmu (b) amu (c) esu (d) etu

58. When the relative atomic mass of element is taken in gram it is known as gram _____ mass.

(a) atomic (b) molecular (c) ionic (d) mass

59. The simplest formula that gives the smallest whole number ratio of the atoms in a compound. is called_____ formula.

(a) empirical (b) molecular (c) ionic (d) mass

60. The formula which represents actual number of atoms of each element in a molecule is called _____formula.

(a) empirical (b) molecular (c) ionic (d) mass

61. The sum of atomic masses of all atoms present in molecule is called _____mass.

(a) empirical (b) molecular (c) ionic (d) mass

62. The molecular mass of the molecules when taken in gram is called gram _____ mass.

(a) empirical (b) molecular (c) ionic (d) mass

63. The sum of atomic masses of all ions present in a formula unit is called _____mass

(a) empirical (b) molecular (c) ionic (d) formula

64. An atom or group of atoms, which take part in a chemical reaction, is called a _____species

(a) chemical (b) physical (c) bio (d) analytical

65. A charge particle is known as

(a) element (b) mixture (c) atom (d) ion

66. A radical is a specie containing an unpaired electron known as _____radical

(a) free (b) bound (c) alone (d) one

CHAPTER 2 STRUCTURE OF ATOM

1. The building blocks of elements are_____
(a)Atoms (b) Ions (c) Radicals (d) Molecules
2. The total number of protons present in the nucleus of an atom is called _____
(a)Mass number (b) Atomic number (c) Atomic radius (d) Atomic mass
3. Electron revolve around the nucleus in fixed _____
(a)Sub shells (b) Orbits (c) Circles (d) Levels
4. The number of electrons in the outer most shell of potassium (at. No.19) is _____
(a)1 (b)2 (c)4 (d)6
5. If we know the atomic number & mass number of an atom we can find its number of _____.
(a) Protons (b) Electrons (c) Neutrons (d) All a , b and c
6. Atomic number is denoted by symbol _____
(a) Z (b) A (c) L (d) O
7. Alpha particles contain two _____ charges
(a)Negative (b) Positive (c) Neutral (d) None of a,b,c
8. The _____ orbit can accommodate up to eight electrons.
(a)Second (b) Third (c) Fourth (d) Fifth
9. The maximum number of electron in a particular orbit is given by formula_____.
(a) $2n^2$ (b) $2n^3$ (c) λ r 2 (d)nh/2T
10. An atom having atomic No.7 will have _____ electrons in its outermost shell.
(a)8 (b)5 (c)2 (d)16
11. What makes an atom of an element different from the atom of another element?
(a)Electron (b) Proton (c) Neutron (d) All a, b, c
12. The total number of protons present in the nucleus of an atom is called _____ number of that element.
(a)Mass number (b) Atomic number (c) Atomic radius (d) Atomic mass
13. The sum of protons and _____ present in the nucleus of an atom is called its mass number.
(a)Electron (b) Proton (c) Neutron (d)All a, b, c
14. The maximum number of electrons in the 1^{st} orbit is _____.
(a) 8 (b)2 (c)18 (d)36
15. As atom is electrically neutral b/c the number of protons in the nucleus is _____ to the number of electrons.
(a)Equal (b) Unequal (c) Opposite (d)All a, b, c
16. The word atom means _____ particle.
(a)Divisible (b) Indivisible (c) Large (d)All a,b,c
17. Hydrogen has positive charge called _____
(a) Neutron (b) Proton (c) Electron (d) atom
18. The maximum number of electron in third energy level is _____
(a)10 (b)18 (c)32 (d)64
19. The K-shell can accommodate _____ number of electrons
(a)2 (b)6 (c)8 (d)18
20. The _____ particle is the lightest one.
(a) An alpha (b) A Hydrogen (c)An Electron (d)A Proton
21. Electron does not _____ in its ground state
(a) Spin (b) Revolve (c) Radiate energy (d) Reside in orbit
22. Rutherford bombarded a gold foil by _____
(a)Alpha particles (b) Beta particles (c) Gamma rays (d) Beta particles
23. Electron does not radiate energy when it _____
(a) Reside in orbit (b) Jump to higher orbit (c) Falls in nucleus (d) Jump from higher to lower orbit
24. Isotopes of an element have different number of _____
(a)Electron (b) Proton (c) Neutron (d) None of these

25. $^{12}_{6}C$, $^{13}_{6}C$, $^{14}_{6}C$ are
(a)Isotope (b) Isomers (c) Allotropes (d) Isobars
26. The most abundant isotope of hydrogen is _____
(a) Protium (b) Deuterium (c) Tritium (d) Both a & c
27. Alpha particles carry _____ charge
(a) Positive (b) Negative (c) Double negative (d) Double Positive
28. The mass of α -particles is equal to the _____ nucleus
(a) Hydrogen (b) Helium (c) Sodium (d) Nitrogen
29. The value of planks constant is _____ j second.
(a)6.626×10^{-23} (b)6.626×10^{-34} (c) 6.023×10^{-24} (d)1.667×10^{-28}
30. Atomic spectrum is a _____ spectrum
(a) Line (b) Continuous (c) Emission (d) Absorption
31. The energy of an electron is _____ in a specific shell
(a) Variable (b) Constant (c) Greater (d) Less
32. The angular momentum of an electron revolving around the nucleus of an atom will be _____
(a)$nh/2\pi$ (b)$nh^2/2\pi$ (c)$nh^3/2\pi$ (d)non of these
33. The velocity of electron is represented by _____
(a) υ (b) λ (c) δ (d) v
34. p- orbital can have a maximum of _____ electron
(a)2 (b) 6 (c) 8 (d)10
35. The p & d sub –shell consist of _____ and _____ orbital respectively
(a) 3 (b) 5 (c) 7 (d) 8
p-orbital are _____ shaped
(a) Dumbbell (b) Spherically (c) Fundamental (d) Sharp
f-orbital is _____ shaped
(a) Spherical (b) Fundamental (c) Sharp (d)Dumb bell
f-orbital contain _____ number of electrons.
(a) 10 (b) 18 (c) 8 (d) 2
Electronic configuration is arrangement of _____
(a) Proton (b) Electron (c) Neutron (d) Nucleon
40. Different atoms of same elements having same chemical properties & different physical properties are called _____
(a) Isotope (b) Allotrope (c) Isobar (d) Isomers
About 0.017% of _____ isotope of hydrogen is present in nature
(a)Protium (b) Deuterium (c) Tritium (d) Natrium
Uranium has _____ atomic number.
(a) 92 (b) 93 (c) 94 (d) 89
43. The age of uranium containing material can be determined by measuring the percentage of _____ formed
(a)Phosphorous (b) lead (c) Mercury (d) Non of these
44. The half life of C)14 is _____ years.
(a) 5700 (b) 5600 (c) 5000 (d) 5500
45. If U has atomic number 235 & mass number 92 then it has _____ number of neutrons.
(a) 142 (b) 143 (c) 147 (d) 141
46. Chlorine 37 has _____ number of neutron.
(a) 18 (b) 20 (c) 19 (d) 17
47. Chlorine reacts with hydrogen _____ time faster than it reacts with deuterium
(a) Five (b) Six (c) Four (d) Two

CHAPTER NO 3 PERIODIC TABLE AND PERIODICITY OF PROPERTIES

1.Atomic weight is
a) fundamental property of element b)not a fundamental property of element
c) fundamental property of atom d) a fundamental property of compound
2. Wavelength of x-rays emitted by each element depends upon.
a. Its atomic weight b. Atomic radius c. Atomic number d. Its atomic size

3. The vertical columns of elements in periodic table are called.
a. Groups b. Periods c. Decedents d. Ascendants
4. The alkali metals are chemically very active due to
a. Electron capturing b. Electron affinity c. Low I.P d. Electro negativity
5. The elements which require one electron to complete their outermost shell can be placed in group
a. I A b.III A c.VI A d. VII A
6. For completion of outermost shell number of electron required by the group V elements are.
a.3 b. 4 c. 5 d. 6
7. Which one of the following metals is the transition metal?
a.Na b. Ca c. Fe d. Be
8. Which of the following is different from the others?
a.Mg b. Ar c. Al d. Ca
9. Dobereiner arranged the elements into groups of _____
a.9 elements b.7 elements c. 3 elements d. 5 elements
10. Elements that has properties of both metals & non-metals are called.
a. Metals b.Non metals c. Metalloids d. None of a,b,c
11. The elements having the tendency of losing electron is
a.K b. P c. O d. Cl
12. Which one is alkaline earth metal?
a.Mg b. Li c. Ar d. Na
13. The solid but unstable member of the halogen group is
a. Astatine b. Phosphorous c.Iodine d. chlorine
14. The most reactive member of halogens is
a.Cl b. I c. F d. Br
15. Oxygen & Sulphur belong to the group
a.II-A b. III-A c. VI-A d. VII-A
16. The sixth period that is long period consist of
a. 25 Elements b. 28 Elements c. 32 elements d. 34 elements
17. Groups of periodic table are divided into
a.3 Subgroups b. 2 Subgroups c. 4 Subgroups d. 5 Subgroups
18. Atomic radius is
a) The size of a single atom b) ½ of the distance of orbit from nucleus
c) ½ of distance b/w the nucleus of the two adjacent atoms. c) ½ of the size of an atom.
19. Ionization energy mainly depends upon
a) The nuclear charge & electro negativity b) The nuclear charge & atomic mass
c) The nuclear charge & valance electron c) The nuclear charge & atomic size
20. Electro negativity of an element tells about the tendency of the atom to
a. Attract electrons b. lose electron c. Lose protons d. Attract protons
21. The tendency of an atom to acquire an electrons in the outermost orbit to have eight electrons is called
a.Newland rule b. Octet rule c. Faraday d. None of a, b, c
22. An element is placed in group VI A of the periodic table. The number of electrons in its outermost shell is
a. 6 electron b. 3 electrons c. 4 electrons d. 5 electrons
23. If we move from left to right in a period , ionization energy values have a change in
a. Decreasing order b. Increasing order c. No change d. None of a, b, c
24.The electro negativity of an element will be high if it is.
a. Small atom & most filled valence shell b. Small atom & nearly filled valence shell
c. Large atom & most filled valence shell d. Large atom & not filled valence shell
25. If we move down in a group the E.N decreases be cause.
a. The number of neutron increases b. Nucleus charge increases
c. Atomic radius increases d. Both a & b
26. The elements starting from atomic numbers 89 to 102 are called
a. Lanthanides b. Actinides c. Alkaline earth metals d.Coinage metals

27. The valence shell of alkali metals contain _____ electron.
a.1 b. 2 c. 3 d. 4
28. The 1st group elements are also termed as _____.
a Lanthanides b. Alkali metals c. Alkaline earth metals d. Coinage metals
29. The carbon family contains _____ electrons in outer most shell.
a. 3 b. 4 c. 5 d.6
30. The ionization potential _____ down the group.
a. Decreases b. Increases c. Constant d. None
31. Mendeleve predicted _____ of the undiscovered elements.
a. Properties b. Length c. Mass d. Volume
32. Repetition of a property at regular _____ is called _____ of the property.
a. Interval, periodicity b. Interval, period c. Periodicity d. Interval
33. The second ionization energy is _____that the first ionization energy.
a. Less b. Greater c. Equal d. Less equal
34. Mendeleev arranged the elements in the order if their increasing _____.
a. Atomic masses b. Atomic no. c. Valency d. Group
35. He, Ne & Ar are _____ elements
a.Noble b. Alkali c.Alkaline earth metals d. Coinage metals
36. Elements present in the A)Subgroup of the periodic table are sometimes called _____ elements.
a. Lanthanides b. Normal c. Alkaline earth metals d. Transition metals
37. There are _____ periods in the periodic table.
a. 8 b. 7 c. 4 d.5
38. The inner transition elements of sixth period are called _____.
a. Lanthanides b. Radioactive c. Transition d. d)block elements
39. Non-metals are present in group _____ to _____ of periodic table.
a. V-VI b. VI-VII c. VII-VIII d. None
40. In a period, from left to right metallic character of the elements_____.
a. Decreases b. Increases c. Constant d.None of these
41. The non-metal of group VIII-A are called _____
a. Noble gases b.Boron family c. Alkaline earth metals d.Coinage metals
42. The halogens have 7 electrons in their outer most shell, their valency is ___
a. 7 b. 8 c. 5 d. 1
43. Fluorine is _____ reactive than Chlorine.
a. More b. Less c. Equal d.None of these
44. All the s & p block elements are called)----------elements.
a. alkaline earth b. representative c.halogens d. transition
45. Out of 118 elements ----------elements are naturally occurring.
a. 90 b. 91 c.92 d.93
46. The law of triads was presented by----------
a.Newland b. Dobereiner c. Lother Meyer d. Mosely
47. The modern periodic table is based on the----------
a. law of triad b.law of octaves c.mendeleev's periodic table d.modern periodic law
48. Another name for group VII is----------
a. alkali metals b. alkaline earth metals c.halogen d. noble gases
49. Which of the following group does not belong to p-block elements.
a. group I b.group III c. group V d.group VII

CHAPTER 4 STRUCTURE OF MOLECULE

1. Good conductor of electricity is,
   (a) Molten NaCl (b)Solid $MgCl_2$ (c) Sugar (d) Solid NH_4Cl

2. Mercury is in liquid state at room temperature; its atoms are bonded to each other by means of _____ bond.
(a) Covalent (b) Ionic (c) Metallic (d) Co-ordinate covalent

3. Which one is not a polar molecule?
(a) H_2O (b) CO (c)H_2 (d) HCl

4. The bond present in hydrogen (H_2) molecule,
(a) Ionic (b) Polar covalent (c) Covalent (d) Non-polar covalent

5. The losing gaining of electron leads to _____ bond.
(a) Single covalent (b) Double covalent (c) Ionic (d) Triple covalent

6. When magnesium completes its octet during a chemical reaction it forms _____ ion.
(a) Uni positive (b) Di positive (c) Tripositive (d) Tri positive

7. The positive charge on atoms indicates that it contains.
(a) More electrons than protons (b) More protons than electrons (c) More protons than neutron (d) More neutrons than electrons

8. In the periodic table the group which contain complete outer most shell is called
(a) Alkali metals (b) Noble gases (c) Transition elements (d) Alkaline earth metal

9. When a metal atom transfers one or more electrons to non- metal the bond formed is,
(a) Ionic (b) Covalent (c) Co-ordinate covalent (d) Polar covalent

10. The metals which have the lowest ionization energies belong to group.
(a) I (b) II (c) III (d) IV

11. At room temperature ionic compounds are,
(a) Solids (b) Liquid (c) Gases (d) Both a & b

12. The bond present in Cl_2 is,
(a) Covalent (b) Polar covalent (c) Co-ordinate covalent (d) Metallic

13. The bond in which the shared electron pair is donated by one of the two bonding atoms is _____ bond
(a) Covalent (b) Co-ordinate covalent
(c) Ionic (d) None of a, b, c

14. At room temperature covalent compounds are _____
(a) Solids (b) Liquids (c) Both a &b (d) None of a, b, c

15. The nitrogen atom in NH_3 has ___ number of lone pairs of electrons.
(a) 2 (b) 4 (c) 1 (d) 3

16. A covalent bond formed between two dissimilar atoms is _____ bond
(a) Polar covalent (b) Non- Polar covalent (c)Co-ordinate covalent (d) none of a, b, c

17. The most probability of formation of ionic bond between the elements of the groups is,
(a) Group II A & III A (b) Group II A & VI A
(c) Group III A & IV A (d) group V-A & VI-A

18. Which has non polar covalent bond,
(a) NH_3 (b) SO_2 (c) H_2S (d) Cl_2

19. The bond in HCl is
(a) Ionic (b) Covalent (c) Polar covalent (d) Co-ordinate Covalent

20. The example of ionic compound is,
(a) N_2 (b)CH_4 (c) KCl (d) NH_3

21. The example of co-ordinate covalent bond is,
(a) H_3O^+ (b)NH_3 (c)H_2O (d) CH_4

22. Ionic compounds in solid states are non-conductors because
(a) They are solids (b) Their ions are not free to move
(c) They do not have free electrons (d) They have big molecules

23. Ionic bond is formed between two atoms having E.N difference of,
(a) 1.7 or above (b) less than 1.7 (c) 1.8 or above (d) Less than 1.8

24. Elements on the left hand side of the periodic table have____ values of E.N
(a) Higher (b) Low (c) Stable (d) None of a,b,&c

25. In co-ordinate covalent bond, the atom which donates electron pairs is called,
(a) Donor atom (b) Acceptor atom (c) Monatomic (d) None of a, b, c

26. Among halogens the most electronegative element is,
(a) Fluorine (b) Chlorine (c) Bromine (d) Astatine

27. The electrons of _____ shell are involved in the formation of a chemical bond.
(a) Valence shell (b) 1^{st} shell (c) 2^{nd} shell (d) 3^{rd} shell

28. The force which holds the two ions together in an ionic compound is
(a) Electrostatic force (b) Electric force
(c) Magnetic force (d) Polar Force

29. A bond formed by sharing of 3 electron pairs is _____ covalent bond.
(a) Single (b) Double (c) Triple (d) None of a, b, c

30. Metals conduct electricity due to presence of
(a) Free electrons (b) Free ions (c) Free protons (d) Free neutrons

31. By loosing one outermost electron Na acquires _____ charge.
(a) A unit negative charge (b) A unit positive charge
(c) Two negative charges (d) two positive charges

32. Helium is a _____ gas.
(a) Noble (b) Ionic (c) Covalent (d)Coinage metals

33. Copper has _____ bond.
(a) Metallic (b) Polar covalent (c) Covalent (d) Non-polar covalent

34. Chlorine has _____ electrons is its valence shell.
(a) 7 (b) 8 (c) 2 (d) 1

35. During bonding hydrogen atom can attain the electronic configuration of _____ atom.
(a) He (b) Ne (c) Ar (d) Rn

36. When sodium reacts with Chlorine _____ bond is formed.
(a) Ionic (b) Covalent (c) Polar covalent (d) Co-ordinate Covalent

37. Ionic compounds are generally _____ in water.
a. Insoluble b. Soluble c. Both a & b d. Moderately Soluble

38. The loosing or gaining of electron leads to _____ bonding.
(a)Ionic (b) Covalent (c) Polar covalent (d) co-ordinate Covalent

39. Positive ions are also called _____.
a. Cations b. Anions c. Cathode d. Anode

40. Negative ions are also called_____.
a. Cations b. Anions c. Cathode d. Anode

41. A molecule that has two oppositely charged ends or poles is called a _____.
a. Non polar b. Polar c. Covalent d Antipolar

42. The type of bond in which the shared pair of electrons is donated by one atom only is called_____.
a. Ionic b.Covalent c.Polar covalent d. co-ordinate Covalent

43. When an atom loses or gains the electrons then it becomes _____.
a. Cations b. Anions c. Cathode d. Anode

44. During the formation of chemical bond elements tends to attain _____ configuration.
a. Noble gases b.Actinides c. Alkaline earth metals d.coinage metals

45. Which statement is true about chemical compounds?
a)ionic compounds are not soluble in water b) covalent compounds dissolve easily in polar solvents
c)like –dissolves like d) Ionic compounds dissolve easily in non polar solvents.

46. According to ----------rule hydrogen complete its outermost shell
(a) Octet (b) duplet (c) new land octave (d) both a&c

47. The adhesives action of paints and dyes is devoped due to
(a) Hydrogen bonding (b) dipole dipole attraction (c) vander waal forces
(d) both a&c

48. Flourine has an electronic configuration 2, 7 and oxygen 2, 6 the formula of fluorine oxide will be.
(a) FO (b) F_2O (c) FO_2 (d) F_2O_2

49. Which one of the following ions do not have the electronic configuration of an argon atom?
(a) Ca^{+2} (b) S^{-2} (c) K^{+} (d) O^{-2}

50. The intermolecular forces are of three types and collectively called _____forces
(a) Van Der wall (b) dipole dipole (c) adhesives (d) cohesives

CHAPTER NO:5 PHYSICAL STATES OF MATTER

1. Water has maximum density at _____ ^oC.
(a) 0 ^{o} (b) 4 ^{o} (c) 100 ^{o} (d) -273 ^{o}

2. Water at _____ has less energy than steam at the same temperature.
(a) 100 ^oC (b) 99.9 ^oC (c) 90 ^oC (d) 0 ^oC

3. The conversion of liquid into vapor is called_____.
(a) Condensation (b) Evaporation (c) Sublimation (d) Crystallization

4. The temperature at which a solid is just converted into its liquid state is called _____.
(a) Freezing point (b) Melting point (c) Transition temperature (d) Absolute temperature

5. The melting point of a substance is always equal to its _____.
(a) Freezing point (b) Boiling point (c) Critical temperature (d) Absolute temperature

6 The substances which have same crystalline forms are called _____.
(a) Polymorphs (b) Isomorphs (c) Allotropic (d) Isomorphism

7. Graphite and diamond are the _____ forms of carbon.
(a) Polymorphous (b) Isomorphous (c) Allotropic (d) Isomorphism

8. A temperature at which two physical forms of a substance co-exist is called its_____.
(a) Boiling point (b) Melting point (c) Freezing point (d) Transition temperature

9. If an element is found in more than one physical form, the property is called _____.
(a) Allotropy (b) Isomorphism (c) Symmetry (d) Polymorphism

10. Diamond crystals are _____conductors of heat.
(a) Very good (b) Bad (c) Good (d) Not

11. The melting point of water is _____.
(a) 0 ^oC (b) -273 K (c) 100 ^oC (d) 4^oC

12. Properties of gases can be described by mentioning temperature, pressure and _____.
(a) Density (b) Volume (c) Rigidity (d) Mobility

13. Which gas diffuses faster?
(a) Helium (b) Nitrogen (c) Oxygen (d) Hydrogen
14. Which one is used as semiconductor?
(a) Graphite (b) Bucky ball (c) Diamond (d) Rhombic
15. Bucky ball is third allotropic form of carbon, discovered in _____.
(a) 1995 (b) 1998 (c) 1990 (d) 1966
16.In graphite carbon atoms are arranged _____ in the form of sheets.
(a) Tetrahedrally (b) Pentagonally (c) Hexagonally (d) Heptagonally.
17. Sulphur exists in _____allotropic forms.
(a) 2 (b) 3 (c) 4 (d) 5
18. Monoclinic is a allotropic form of _____.
(a) Carbon (b) Sulphur (c) Calcium (d) Phosphorus
19. The allotropic forms of sulphur exist at the temperature of _____.
(a) 95.5 ^{o}C (b) 99.9 ^{o}C (c) 90 ^{o}C (d) 94.5 ^{o}C
20. Which one posses the property of rigidity?
(a) Liquid (b) Gas (c) Solid (d) Plasma
21. A mathematically relationship of Charle's law is _____.
(a) $\frac{V}{T} = K$ (b) $VT = K$ (c) $\frac{1}{K} = \frac{T}{V}$ (d) $V = KT$
22. A mathematical relationship of Boyl's law is _____.
(a) $PV = K$ (b) $\frac{1}{P} = VK$ (c) $PK = V$ (d) $\frac{1}{KV} = P$
23. Which one has low density?
(a) Solid (b) Liquid (c) Gas (d) Plasma
24. 1 atom is equal to _____.
(a) 760mm of Hg (b) 766mm of Hg (c) 777 mm of Hg (d) 788mm of Hg
25. Which one show greater rate of evaporation.
(a) Phenol (b) Acetone (c) Alcohol (d) Water
26. The particles of a crystalline solid are arranged in a regular _____dimension.
(a)Two (b) One (c) Three (d) Four
27. Very low temperature can be produced by the _____of gases.
(a) Expansion (b) Compression (c) Contraction (d) None
28. A heavier gas possesses _____energy at the same temperature as lighter gas
(a) More (b) Less (c) Same (d) None
29. By standard temperature, we mean _____.
(a) 0 ^{o}C (b) 0 ^{o}K (c) 273^{o}K (d) 24 ^{o}C
30. By standard pressure, we mean _____ of Hg.
(a) 700mm (b) 76cm (c) 100cm (d) 77cm
31. Water can exist in _____ physical states at a certain condition of temperature and pressure.
(a) 1 (b) 2 (c) 3 (d) 4
32. All gases solidify at _____^{o}C
(a) 100 (b) -273 (c)-200 (d) 0
33. The increase in temperature of the gases decreases the _____.
(a) Pressure (b) Volume (c) Forces of attraction (d) Kinetic energy
34. Which is the pressure of a gas, if the volume of the gas at 2atm is increased from 1.5 dm^3 to 3dm^3?
(a) 1atm (b) 1.5atm (c) 2atm (d) 2.5atm
35. Ink spreads in water because of _____.
(a) Vapor pressure (b) Compressibility (c) Diffusion (d) Dipole moment

36. The vapor pressure of a liquid in a closed container depends upon _____.
(a) Amount of the liquid (b) Surface area of the liquid (c) Temperature (d) Volume of the liquid.
37. At higher altitude water boils_____.
(a) At any temperature (b) At 100^{o}C (c) Higher than 100^{o}C (d) lower than100^{o}C
38. Evaporation takes place _____.
(a) At all temperature (b) Only at low temperature
(c) When quantity of the liquid is more (d) When quantity of the liquid is less
39. Water always boils when _____.
(a) Its temperature is 150 ^{o}C (b) Atmospheric pressure is increased
(c) Its vapor pressure becomes equal to the atmospheric pressure
(d) Its vapor pressure reaches zero
40. The boiling point of a liquid increases if
(a) The amount of liquid decreases (b) The dimension of the container increases (c) The forces of attraction increase (d) More heat is provided
41. Glass is solid which is
(a) Crystalline (b) Amorphous (c) Allotrope (d) None
42. The crystalline forms of carbon exist in _____.
(a) Rhombic, monoclinc (b) Cubic, tetragonal (c) Cubic, hexagonal (d) Rhombic, cubic
43. Density of liquid oxygen at -103^{o} is:
(a) 1.149g/cm^3 (b) 1.159g/cm^3 (c) 1.169g/cm^3 (d))1.249g/cm^3
44. Boiling point of chloroform is:
(a) 165^{o}C (b) 61.2^{o}C (c) 69.2^{o}C (d) 71.2^{o}C
45. The primary ingredient of preserving meat is:
(a) Sodium Chloride (b) Sodium Bromide (c) Sodium Iodide (d) Calcium Chloride
46. What will be the final pressure of a sample of gas that is changed at constant temperature to 14.3dm^3 from 7.55dm^3 at 828torr?
(a) 473.160 torr (b) 673.160 torr (c) 347.150 torr (d) 400.140 torr
47. The final volume at 302 K of a 5.41dm^3 sample of gas originally at 353 K if the pressure does not change is:
(a) 7.324dm^3 (b) 6.323dm^3 (c) 7.324dm^3 (d) 7.324dm^3
48. Volume occupied by 0.5 mole of carbon dioxide at a pressure of 150kPa and at temperature of 19 °C will be:
(a) 8.09 dm^3 (b) 8.89 dm^3 (c) 9.09 dm^3 (d) 8.13 dm^3
49. In order to increase the volume of a gas by 10%, the pressure of the gas should be:
(a) Increased by 10% (b) Increased by 1% (c) Decreased by 10% (d) Decreased by 1%
50. Intermolecular attractive forces include which of the following?
(a) Hydrogen ions (b) Vander Waals forces (c) Bose-Einstein attraction (d) solids
51. Which of the following is NOT a **way** that matter changes phase?
(a) Melting (b) Freezing (c) Evaporation (d) Mixing
52.Force of attraction and repulsion in gaseous molecule is:
(a) Present (b) Absent (c) Slight (d) Huge
53. Vapor pressure is directly proportional to temperature because of:
(a) More kinetic energy (b) Faster particle movement (c) More potential energy
(d) both A & B

CHAPTER: NO.6 SOLUTIONS

1. A molar solution contains one mole of a solute dissolved in _____.
   (a) 1 liter (b) 100g (c) 1 kg (d) 100dm^3
2. The solubility usually_____ with increasing temperature.
   (a) Increases (b) Decreases (c) Same (d) Slightly increases
3. Completely miscible pair is _____.
   (a)Water & alcohol (b) Water & sugar (c) Water & salt (d) Water & fat
4. Partially miscible pair is _____.
   (a) Phenol & water (b) Water & benzene (c) Water & alcohol (d) Benzene & phenol
5. Completely immiscible pair is _____.
   (a) Water & alcohol (b) Phenol & water (c) Water & benzene (d) Phenol & alcohol
6. The solution which contains excess of solute as compared to the solvent is called_____.
   (a) Dilute solution (b) Aqueous solution (c) Concentrated solution
   (d) Standard solution
7. The solution which contains less solute as compared to the solvent is called _____.
   (a) Dilute solution (b) Aqueous solution (c) Concentrated solution
   (d) Standard solution
8. Solubility is the amount of solute in grams dissolved in _____ grams of solvent.
   (a) 100g (b) 10g (c) 1g (d) 1000g
9. The example of colloid is _____.
   (a) Starch in water (b) Alcohol in water (c) Salt in water (d) Sugar in water
10. _____is a universal solvent.
    (a) Kerosene oil (b) Phenol (c) Benzene (d) Water
11. A heterogeneous mixture of different substances is called_____.
    (a) Suspension (b) Colloids (c) Solution (d) None
12. Dissolution of sodium chloride in water is called_____.
    (a) Suspension (b) Solution (c) Colloid (d) None
13. Sugar dissolves in water due to_____.
    (a) Hydrogen bonding (b) Ionic bonding (c) Metallic bonding (d) OH group
14. Which one easily dissolves in water?
    (a) Alcohol (b) Salt (c) Sugar (d) Benzene
15. Which one shows low solubility in water_____.
    (a) Sodium chloride (b) Sugar (c) Alcohol (d) Benzene
16. _____are more soluble in cold solvents than in hot solvents.
    (a) Solids (b) Liquids (c) Gases (d) Plasma.
17. In_____ reaction the solubility increases with increasing temperature.
    (a) Exothermic reaction (b) Endothermic reaction (c) Condensation reaction
    (d) All of these
18. In_____ reaction the solubility decreases with increasing temperature.
    (a) Exothermic reaction (b) Endothermic reaction (c) Condensation reaction
    (d) All of these
19. Dental amalgam is an example of_____.
    (a) Liquid in solid (b) Liquid in liquid (c) Solid in liquid (d) Gas in liquid
20. Which one is a dilute solution?
    (a) 5g of sugar in 100ml (b) 6g of sugar in 100ml (c) 3g of sugar in 100ml
    (d) 2g of sugar in 100ml
21. The solution which has less amount of solute is called_____.

(a) Saturated solution (b) Unsaturated solution (c) Super saturated solution
(d) Aqueous solution

22. Which solution has the capacity to dissolve more solute?
(a) Saturated solution (b) Unsaturated solution (c) Super saturated solution
(d) Aqueous solution

23. The solution which can't dissolve more solute at a given temperature is called_____.
(a) Saturated solution (b) Super saturated solution (c) Unsaturated solution
(d) Aqueous solution

24. A solution in which water is used as a solvent is called _____.
(a) Aqueous solution (b) Saturated solution (c) Standard solution
(d) Unsaturated solution

25. Binary solution means it consists of _____ components.
(a) 2 (b) 3 (c) 4 (d) 6

26. Solution whose concentration is known is called as _____.
(a)Aqueous solution (b) Saturated solution (c) Standard solution (d) Non aqueous solution

27. Keeping in mind that all the given substances are organic, which one is soluble in water?
(a) Kerosene oil (b) Carbon tetrachloride (c) Methyl alcohol (d) Benzene

28. Water in air is an example of solution of _____.
(a) Gas in gas (b) Gas in liquid (c) Liquid in gas (d) Liquid in liquid.

29. Weight of solute present in 100g of solution is called_____.
(a) Percentage V/W (b) Percentage W/W (c) Percentage V/V (d) Percentage W/V

30. A mixture in which solute particles dissolve in solvent is called _____.
(a) Heterogeneous mixture (b) Solution (c) Colloidal solution (d) Suspension

31. The boiling point of a solution as compared to the solvent is _____.
(a) Higher (b) Lower (c) Remains same (d) Variable

32. The particles of solute in colloids are _____.
(a) Visible (b) Invisible
(c) In size like suspension solute (d) In size like solution solute

33. 2 moles of Na_2SO_4 are dissolved in one dm^3 of solution. Molarity of the solution is:
(a) 1 (b) 2 (c) 3 (d) 4

34. The molecules of ice have?
(a) An ionic bond between them (b) A covalent bond between them
(c) A co-ordinate covalent bond between them (d) Hydrogen bonding between them

35. The Tyndall effect is a property that can be used to distinguish between a solution and
(a) A Suspension (b) A colloid (c) A standard solution (d) A dilute solution

36. 1 dm^3 is equal to:
(a) 1 liter (b) 1000cm^3 (c) 1000ml (d) All of these

37. Which of the following factors affect solubility?
(a) Nature of Solute and solvent (b) Pressure (c) Temperature (d) All of these

38. The solubility of NaCl _____ by increasing temperature:
(a) Increases (b) Decreases (c) Is not affected (d) Drastically increases

39. The solubility of CaO _____ by increasing temperature:
(a) Increases (b) Decreases (c) Is not affected (d) Increases up to certain limit

40. By the increase in pressure solubility of gases _____:
(a) Increases (b) Decreases (c) Remains the same (d) First increases then decreases

41. The process of settling down of particles at the bottom is known as :
(a) Filtration (b) Separation (c) Sedimentation (d) Suspension

42. Mayonnaise is the example of:
(a) Foam (b) Solid aerosol (c) Liquid aerosol (d) Liquid emulsion
43. Cheese is the example of:
(a) Solid emulsion (b) Sol (c) Liquid emulsion (d) Gel
44, Water droplet in air is an example of solution:
(a) Gas in gas (b) Gas in liquid (c) Liquid in gas (d) Liquid in liquid
45. Which of the following can be separated by filtration?
(a) Solution (b) Colloid (c) Suspension (d) All of these
46. The number of moles of solute dissolved per dm^3 of solution is called:
(a) Molarity (b) Molality (c) Concentration (d) Percentage composition
47. Ionic solutes dissolve well in _____:
(a) Polar solvents (b) Non polar solvents (c) Both (d) None
48. Flour in water is an example of:
(a) Solution (b) Suspension (c) Colloid (d) Mixture
49. Changing pressure does not affect the solubility of _____:
(a) Solids (b) Liquids (c) Gases (d) Both (a) and (b)
50. Which of the following is not a pure substance?
(a) salt (b) oxygen gas (c) air (d) gold

QUESTIONS:

1. Show ionic bond formation with the help of equation and diagram in NaH, $MgCl_2$ and CaO
2. Predict bond type in CO_2 , N_2 ,C_2H_4, C_2H_2, H_20
3. Draw Lewis structure of CCl_4, NH_3, CH_4 and HCl
4. Calculate number of moles in 2 g of carbon dioxide and number of particles in 6 mole of oxygen.
5. State Boyles law. Prove it experimentally

8. COMPUTER

1. Which computer is a combination of digital and analog technologies?
   a) hybrid b) super c) mini d) mainframe
2. Which of the following is an output device for providing hard copy of output?
   a) scanner b) printer c) speaker d) microphone
3. In Windows, which folder keeps files that have been deleted, whether accidentally or intentionally?
   a) my computer b) my document c) recycle bin d) my files
4. Which program protects computer from many common viruses and Trojans which can be harmful for the system?
   a) internet explorer b) excel c) word d) antivirus
5. The basic unit for entering data in Excel is:
   a) cell b) row c) column d) formula
6. In Word document which option is used to move text from one place(source) to another place (destination)?
   a) cut-print b) copy-print c) copy-paste d) cut-paste
7. The rows in Excel are denoted by:
   a) letters b) numbers c) words d) signs

8. In which type of transmission, data is transmitted block-by-block or word)by-word simultaneously:
   a) parallel b) serial c) asynchronous d) synchronous
9. Which of the following is an example of an unguided Transmission media?
   a) satellite b) microwave c) coaxial cable d) both a and b
10. In which transmission, data flow only in one direction from the sending device to the receiving side:
   a) simplex b) duplex c) half duplex d) full duplex
11. What is gaining an unauthorized access to computers or telecommunications systems is called?
   a) hacking b) cracking c) lacking d) tracking
12. The term computer derived from Latin word 'computare', which means _____.
   a) input data b) to calculate c) efficient d) none of these
13. The first mechanical computer was developed by the Charles Babbage in _____.
   a) 1922 b) 1822 c) 1722 d) 1622
14. For voice recording we use?
   a) microphone b) monitor c) speaker d) scanner
15. Monitor resolution is often expressed in _____.
   a) A) dpi B) bpi C) bips D) mips
16. Who is said to be the father of computers?
   a) Blaise Pascal Charles Babbage C) John Napier D) Mark
17. The process of manipulating of data in useful form is _____ operation.
   a) input b) output c) processing d) storing
18. Which of the following is an updated form of UNIX operating system?
a) windows b) linux c) dos d) netware
19. Which program protects computer from many common viruses and Trojans which can be harmful for the system?
a) internet explorer b) excel c) word d) antivirus
20. A _____ is one in which user types in commands to make the computer do something.
a) cli b) mdi c) gui d) unix
21. _____ keeps the files that have been deleted.
a) computer b) recycle bin c) control panel d) network
22. Robotics is an example of _____ OS.
a) dos b) batch operating system c) time sharing system d) real time processing system
23. Which interface consist of a series of screens to navigate by choosing options from lists, i.e. menu?
a) command driven b) gui c) menu driven d) list driven
24. Which of the following operating system allows a user to work in a single program at any given time?
a) single user b) multiuser c) multitasking d) real time
25. The basic unit for entering data in Excel is:
a) cell b) row c) column d) formula
26. The rows in Excel are denoted by:

a) letters b) numbers c) words d) signs

27. Whish layout gives the view of the document as it appears in a web browser?
a) print b) page c) web d) outline
28. In word document which option is used to move text from one place (source) to another (destination)?
a) cut-print b) copy-print c) copy- paste d) cut-paste
29. Which of the following break option is used to move text to a new page before reaching the end of page?
a) page break b) section break c) line break d) column break
30. Which of the following are the blank spaces around the edges of the page?
a) header b) footer c) page margins d) alignment
31. _____ are the graphic presentations of data from a worksheet.
a) range b) charts c) functions d) formulas
32. What is a device used in a communication system to send or transmit data to another device called?
a) Receiver, b) sender, c) medium, d) channel
33. In which type transmission, data is transmitted block-by-block or word)by-word simultaneously?
a) parallel b) serial, c) asynchronous, d) synchronous
34. Which of the following is an example of guided transmission media?
a) satellite, b) microwave, c) coaxial cable, d) infrared
35. Which technology allows computing devices to communicate via short-range wireless signals?
a) satellite b) microwave c) cellular radio d) infrared
36. In which of the following transmission impairment the signal changes its shape and form?
a) attenuation, b) distortion, c) noise, d) cross talk
37. Which communication device is used in networking environment to connect computers to the same network?
a) switch, b) hub, c) router, d) mode
38. What are raw facts and figures given to the computer as input for processing called?
a) Information, b) data, c) network, d) output
39. What is the physical layout of joining a number of computers in the form of a network called?
a) layout b) connection c) network d) topology
40. Which communication technique allows several users to share a band of frequencies?
a) Dial-up b) DSL c) ISDN d) CDMA
41. What is a collection of computers and devices interconnected by communications channels called?
a) channel b) communication c) network d) topology
42. In which transmission data flow only in one direction from the sending device to the receiving device
a) simplex b) duplex c) half duplex d) full duplex
43. In which network topology all nodes are connected to a common communication medium or central cable?
a) bus b) ring c) star d) mesh

44. In which network architecture there is one dedicated computer which is called server?
a) dedicated b) point to point c) peer to peer d) client/server
45. A computer network allows sharing of _____.
a) hardware resources b) programs c) data files d) all of them
46. Which of the following should not be written down or shared with others?
a) password b) user id c) program d) data
47. . Which of the following has concern with the correct handling of personal information?
a) Accuracy B) Privacy C) Authority D) Authentication
48. Which of the following refers to any crime that involves a computer and a network?
a) robbery b) theft c) cyber-crime d) shop lifting
49. 52. Which of the following is the exclusive legal right that prohibits copying of intellectual property?
a) legal right b) copyright c) book right d) all right
50. The people who do cracking are called_____.
a) hackers b) programmers c) crackers d) browsers
51. _____ is advertising-supported software, which gets the online ads to play automatically.
a) adware b) spyware c) malware d) worms
52. Where the Microsoft office button is located in Word Window?
a) top right b) bottom right c) top left d) bottom left
53. What is a piece of text or an image in a document that can connect readers to another portion of the document or web page called?
a) margin b) hyperlink c) file d) web page
54. Which program is used to view internet sites or pages?
a) internet explorer b) web viewer c) word d) excel
55. What is gaining an unauthorized access to computers or telecommunications systems called?
a) hacking b) cracking c) lacking d) tracking

QUESTIONS:

i. Define term topology, explain different types of topologies.
ii. Differentiate between client's server and peer to peer network.
iii. List the characteristics of 5 generations.
iv. Explain different types of transmission impairment.
v. Differentiate between guided and unguided media with examples.
vi. Synchronous Vs Asynchronous transmission.
vii. Define operating system and its objectives.
viii. Create a Time Table for a class in MS Word.
ix. How would you Copy/ cut files from one location to another?

9. MATH

CHAPTER # 1 MATRICES

1) The matrix $\begin{bmatrix} 0 & 0 \\ 0 & 0 \end{bmatrix}$ is _____

a) Row matrix b) Column matrix c) Identity matrix w.r.t addition
d) Diagonal matrix

2) The matrix $\begin{bmatrix} -1 & 0 \\ 0 & -1 \end{bmatrix}$ is _____

a) Diagonal matrix b) Scalar matrix c) Identity matrix w.r.t multiplication
d) None of these

3) The matrix $\begin{bmatrix} 2 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 3 \end{bmatrix}$ is _____

a) Scalar matrix b) Diagonal matrix c) Identity matrix w.r.t multiplication d) None of these

4) The matrix $\begin{bmatrix} 5 & 0 \\ 0 & -3 \end{bmatrix}$ is _____

a) Scalar matrix b) 2-by-3 c) Diagonal matrix d) None of these

5) The matrix $\begin{bmatrix} 2 & 0 & 0 \\ 0 & -1 & 0 \\ 0 & 0 & 3 \end{bmatrix}$ is_____

a) *pqr* matrix b) Diagonal matrix c) Scalar matrix d) None of these

6) If A = $\begin{bmatrix} 7 & 8 \\ 3 & 2 \end{bmatrix}$, then *adj A* =_____

a) $\begin{bmatrix} 2 & 8 \\ -3 & 7 \end{bmatrix}$ b) $\begin{bmatrix} 7 & -8 \\ -3 & 2 \end{bmatrix}$ c) $\begin{bmatrix} 2 & -8 \\ -3 & 7 \end{bmatrix}$ d) $\begin{bmatrix} 7 & 3 \\ 8 & 2 \end{bmatrix}$

7) If A= $\begin{bmatrix} 2 & 3 \\ 3 & 4 \end{bmatrix}$,then A)^{1}=_____

a) $\begin{bmatrix} 4 & 3 \\ -3 & 2 \end{bmatrix}$ b) $\begin{bmatrix} 4 & -3 \\ -3 & 2 \end{bmatrix}$ c) $\begin{bmatrix} -2 & 3 \\ 3 & -4 \end{bmatrix}$ d) $\begin{bmatrix} -4 & 3 \\ 3 & -2 \end{bmatrix}$

8) Matrix A = $\begin{bmatrix} 1 \\ 2 \end{bmatrix}$ is of order _____

a)1×1 b) 2×1 c) 1×2 d) 2×2

9) The matrix $\begin{bmatrix} -2 & 3 \end{bmatrix}$ is called _____

a) Column matrix b) Square matrix c) Row matrix d) Scalar matrix

10) The matrix $\begin{bmatrix} x & 0 \\ 0 & y \end{bmatrix}$ is known as_____

a) Scalar matrix b) Identity matrix c) Diagonal matrix d) Null matrix

11) If A = $\begin{bmatrix} -5 & -7 \\ 2 & 1 \end{bmatrix}$, then transpose of A i-e A^{t} =_____

a) $\begin{bmatrix} 1 & -7 \\ 2 & -5 \end{bmatrix}$ b) $\begin{bmatrix} 1 & 7 \\ -2 & 1 \end{bmatrix}$ c) $\begin{bmatrix} -5 & 2 \\ -7 & 1 \end{bmatrix}$ d) $\begin{bmatrix} -5 & 1 \\ -7 & 2 \end{bmatrix}$

12) If A = $\begin{bmatrix} a & b \\ c & d \end{bmatrix}$, then $|A|$ =_____

a) ac)bd b) bc)ad c) ad) bc d) ab)cd

CHAPTER # 2 REAL AND COMPLEX NUMBERS

1) 2^0 = _____

a) 2 b) 1 c) $\frac{1}{2}$ d) -2

2) $\sqrt{81}$ =_____

a) 8 b) 9 c) -9 d) 8.5

3) The quotient of two complex numbers is_____

a) Real b) Imaginary c) Real and imaginary d) None of these

4) 2(3+4) = 2.3+2.4.The property used is _____

a) Commutative b) Associative c) Distributive d) Closure

5) $\sqrt{-1} \times \sqrt{-1}$ =_____

a) 1 b) -1 c) i d) 0

6) 2^0 = _____

b) 2 b) 1 c) $\frac{1}{2}$ d) -2

7) $\sqrt{81}$ =_____

a) 8 b) 9 c) -9 d) 8.5

8) If x $\in$ Q, then x+y = y+x is called _____

a) Closure property b) Associative property w.r.t '$\times$'

c) Commutative property w.r.t '+' d) Associative property w.r.t '$\times$'

9) a(b)c) = _____

a) ab)c b) ab)ac c) ac)ab d) b)ac

10) The additive inverse of $\frac{-4}{5}$ is _____

a) $\frac{-5}{4}$ b) $\frac{4}{5}$ c) $\frac{5}{4}$ d) None of these

11) In x.1 = 1.x , then '1' is called _____

a)Additive identity b) Additive inverse

c) Multiplicative inverse d) Multiplicative identity

12) 3 and $\frac{1}{3}$ are _____ of each other.

a) Additive inverse b) Additive identity

c) Multiplicative inverse d) Multiplicative identity

CHAPTER#4 ALGEBRAIC EXPRESSIONS AND FORMULAS

1. The expression $2x^2+x$ is a _____

a) Rational algebraic expression (b) Binomial c) Zero polynomial (d) None of these

2. Expression of the form $\frac{P(x)}{Q(x)}$ (Q(x) $\neq 1$,Q(x) $\neq 0$) is a _____

a) Binomial expression b) Rational number c) Algebraic expression

d) None of these

3. P(x) = 1 is a_____
a) Polynomial of degree 1 b) Polynomial of zero degree c) Binomial
d) Trinomial

4. The rational expression $\frac{x-3}{2x+5}$ is _____
a) in the lowest term b) not in the lowest term
c) has x as a common factor d) None of these

5. $(a+b)^2+(a)b)^2$=_____
a) 4ab b) $2(a^2+b^2)$ c) $a^4-2a^2b^2+b^4$ d) None of these

6. $(a+b)^2-(a)b)^2$=_____
a) 4ab b) $2(a^2+b^2)$ c) $a^2-4ab+b^2$ d) None of these

7. $(a+b+c)^2$ =_____
a) $a^2+b^2+c^2$ b) $a^2+b^2+c^2+2(a+b+c)$
c) $a^2+b^2+c^2+2(ab+bc+ca)$ d) None of these

8. $(a+b)^3$ = _____
a) $a^3+3(a+b)+b^3$ b) $a^3-3ab(a+b)+b^3$
c) $a^3+3ab(a+b)+b^3$ d) None of these

9. $(a-b)^2$ =_____
a) $a^2-2ab+b^2$ b) a^2-ab+b^2 c) a^2-b^2 d) None of these

10. $(a+b)^2-(a)b)^2$=_____
a) 4ab b) $2(a^2+b^2)$ c) $a^2-4ab+b^2$ d) None of these

11. a^2-b^2=_____
a) $(a-b)^2+2ab$ b) (a+b)(a)b) c) (a)b)(a)b) d) $a^2-2ab+b^2$

12. (a^3+b^3)=_____
a) $(a+b)^3$ -2ab(a+b) b) (a+b)(a^2+ab+b^2)
c) (a)b) (a^2-ab+b^2) d) (a+b) (a^2-ab+b^2)

CHAPTER#7 LINEAR EQUATIONS

1) The solution set of linear equation in one variable has _____
a) One element b) Two elements c) No element d) Infinite number of elements

2) $|a+b|$ _____.
a) = $|a|+|b|$ b) $\leq |a|+|b|$ c) $> |a|+|b|$ d) $\geq |a|+|b|$

3) $x \geq 5$ means .
a) x>5 b) x=5 c) x>5 or x=5 d) x< 5 or x=5

4) The solution set of $\sqrt{x}$ = -10 is_____.
a) {100} b) {10} c) {-10} d) { }

5) $\sqrt{x+3}$ +2 =11 is a _____.
a) Linear equation b) Radical equation c) Cubic equation
d) Quadratic equation

6) The solution set of 5-3x = -4 is_____
a) {-3} b) {1, 3} c) {3} d) {9}

7) The solution set of $\sqrt{5x+3}$ +2 = 4 is _____

a) $\left\{\frac{1}{5}\right\}$ b) $\left\{-\frac{1}{5}\right\}$ c) {2} d) {1}

8) What is the meaning of the compound sentence $-3 < x < 3$?

a) $x > 3$ b) $x > -3$ c) $x < -3$ d) $-3 < x$ and $x < 3$

CHAPTER # 9 INTRODUCTION TO COORDINATE GEOMETRY

1) The in-centre is equidistant from _____ of triangle.

a) One side b) Two sides c) Three sides d) Two angles

2) In a right angled triangle one angle is _____.

a) 180° b) 270° c) 90° d) 360°

3) The mid point of the segment $\overline{AB}$, where A (3, 0) and B (3, 4) is _____

a) (3, 3) b) (3, 2) c) (6, 4) d) (6, 2)

4) $\left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$ is called _____

a) Mid point formula b) Distance formula c) Ratio formula d) Division formula

5) Two perpendicular segments meet in a_____angle.

a) 45° b) 60° c) 180° d) 90°

6) If P1 (2, 0) and P_2 (0, 2) are any two points in a plane, then $|P_1P_2|$ =_____

a) 4 b) $\sqrt{2}$ c) $2\sqrt{2}$ d) 0

7) If all the three sides of a triangle are different in lengths, it is called_____triangle

a) Equilateral b) Isosceles c) Scalene d) Right- angled

8) A triangle in which all the three sides and three angles are equal is called _____ triangle.

a) Equilateral b) Isosceles c) Scalene d) Right- angled

9) The point through which all the medians of the sides of a triangle pass is called_____

a) In-circle b) Centroid c) In centre d)None of these

10) From two points we can draw_____

a) One line b) Four lines c) Two lines d) Three lines

CHAPTER # 10 CONGRUENT TRIANGLES

1) Which of the following is not a sufficient condition for the congruency of two triangles? _____

a) A.S.A $\cong$ A.S.A b) H.S $\cong$ H.S c) S.A.A $\cong$ S.A.A d) A.A .A $\cong$ AAA.

2) Diagonal of _____does not divide it into two congruent triangles.

a) Rectangle b) Square c) Parallelogram d) Trapezium

3). In Δ ABC, if $\angle A \cong \angle B$, then bisector of _____ divides the ΔABC into two congruent triangles.

a) $\angle A$ b) $\angle B$ c) $\angle C$ d) any one of its angles

4).In an equilateral triangle ABC, the bisector of_____ divides the triangle into two congruent triangles.

a) $\angle A$ b) $\angle B$ c) $\angle C$ d) any of its angles

5) In a right-angled isosceles triangle, measure of each angle on the base is_____

a) 90° b) 60° c) 30° d) 45°

CHAPTER #11 PARALLELOGRAMS AND TRIANGLES

1) If the diagonals of a quadrilateral divide the figure into two four congruent triangles, then the quadrilateral is a _____

a) Trapezium b) Parallelogram c) Rectangle d) Square

2) If the diagonals of a quadrilateral are the perpendicular bisectors of each other but the diagonals are not congruent to each other then, the quadrilateral is a _____

a) Rectangle b) Kite c) Square d) Trapezium

3) Diagonals of a square are _____to each other.

a) Perpendicular b) Not Congruent c) Congruent d) Both 'a' and 'c'

4) Sum of measures of interior angles of a quadrilateral is _____

a) 2 right angles b) 4 right angles c) 3 right angles d) None of these

5) Measure of a line segment joining he mid points of $\overline{AB}$ and $\overline{AC}$ of Δ ABC is 3.5cm, then m $\overline{BC}$

a) 4.5cm b) 5.5cm c) 6cm d) 7cm

6) Two medians $\overline{AD}$ and $\overline{BE}$ of Δ ABC intersect each other a G. If m $\overline{GD}$ =1.7 cm, then m $\overline{AG}$ =_____

a) 2.7cm b) 0.85cm c) 3.4cm d) 5.1cm

7) If sum of measures of $\angle$A and $\angle$C of a parallelogram ABCD is 130°, then m$\angle$B =_____

a) 25° b) 50° c) 65° d) None of these

8) If two opposite angles of quadrilateral are equal in measure and none of them is a right angle, then the quadrilateral is a _____

a) Square b) Parallelogram c) Trapezium d) Rectangle

9) _____ of a parallelogram are congruent.

a) Adjacent sides b) Opposite sides c) All sides d) All angles

10) Medians of a triangle are divided at their point of concurrency in the ratio _____

a) 1: 2 b) 2: 1 c) 1: 3 d) 3 : 1

CHAPTER # 12 LINE BISECTORS AND ANGLE BISECTORS

1) Which of the following are concurrent? _____

a) Bisectors of the angles of a triangle b) Perpendicular bisectors of the sides of a triangle c) Medians of a triangle d) All of the above

2) Perpendicular bisectors of a triangle are _____

a) Congruent b) Concurrent c) Parallel to each other d) None of these

3) Perpendicular bisector of the base of a triangle passes through its vertex angle. The triangle is a/an_____

a) Right angled triangle b) Scalene triangle

c) Isosceles triangle d) Acute angled triangle

4) In an equilateral triangle, all the perpendicular bisectors are_____

a) Congruent b) Concurrent

c) The angle bisector as well d) all the above are true

5) Point of intersection of the angle bisectors of a triangle is equidistant from _____of the triangle

a) the vertices b) the sides

c) mid points of the sides d) all of the above

CHAPTER # 13 SIDES AND ANGLES OF TRIANGLE

1) An exterior angle of a triangle measures 100°.If measure of one of its non-adjacent interior angles is 30°,the measure of the second angle is _____

a) 30° b) 70° c) 50° d) 130°

2) Exterior angle of a triangle and its adjacent interior angles are_____

a) Complementary b) Supplementary c) Congruent d) Not equal in measure

3) Measure of one side of an equilateral triangle is 6 cm. Length of its median is _____ 9 cm

a) Less than b) Greater than c) Equal to d) None of these

4) Perimeter of rectangle is 22 cm.Length of its diagonal is_____11 cm

a) Equal to b) Greater than c) Less than d) None of these

5) ABCD is parallelogram such that m$\angle$C =105°.Which one of the following is the longest side? _____

a) $\overline{AB}$ b) $\overline{BC}$ c) $\overline{CD}$ d) $\overline{BD}$

6) Measures of two sides of a triangle are 7.2 cm and 6.5 cm. Which of the following can be its third side?

a) 12 cm b) 14 cm c) 13.7 cm d) All of the above

CHAPTER # 14 RATIO AND PROPORTION

1) If two triangles are _____, then the measures of their corresponding sides are proportional.

a) Similar b) Not similar c) Proportional d) None of these

2) If the angles of ΔABC are congruent to the corresponding angles of ΔDEF, then the triangles are_____

a) Proportional b) Similar c) Not similar d) None of these

3) In ΔPQR, $\overline{PL}$ bisects $\angle$P and meets $\overline{QR}$ at L. If m$\overline{PQ}$ = 6 cm, m$\overline{PR}$ = 5 cm and m$\overline{QL}$ =3 cm then m$\overline{LR}$ = _____

a) 5 cm b) 2.5 cm c) 3 cm d) 6 cm

4) In ΔABC, D is a mid point on $\overline{BC}$, such that $\frac{m\overline{AB}}{m\overline{BD}} = \frac{m\overline{AC}}{m\overline{DC}}$, then $\overline{AD}$ is the _____ of $\angle$A.

a) Right bisector b) Bisector c) Altitude d) Median

5) If a line segment intersects the two sides of a triangle in the same ratio then it is _____to the third side.

a) Perpendicular b) Parallel c) Non parallel d) None of these

CHAPTER # 17 PRACTICAL GEOMETRY

1) If the measures of two sides and an angle (not included) of a triangle are given, then how many triangles can be constructed?

a) One triangleb) Two triangles c) No triangle d) All the three possibilities exist

2) The point of intersection of the _____of a triangle divides them in the ratio 2:1.

a) Angle bisectors b) Perpendicular bisectors c) Altitudes (d) Medians

3) In a triangle ,the line segment joining a vertex to the mid point of the opposite side of the triangle is called_____
   a) Median b) Altitude c) Angle bisector d) Perpendicular bisector
4) A line which is perpendicular to a line segment at its mid point is called a/an_____
   a) Perpendicular bisector b) Median c) Altitude d) Angle bisector
5) Which of the following data is not sufficient to construct a unique triangle ABC?
   a) $m\angle A = 90^\circ$, $m\angle B = 60^\circ$ and $m\angle C = 30^\circ$
   b) $m\angle A = 90^\circ$, $m\overline{BC} = 5$ *cm and* $\overline{AC}$ =3 cm
   c) $m\overline{AB} = 7$ *cm,* $m\overline{BC} = 6$ cm and $m\overline{CA} = 5$ *cm*
   d) $m\overline{AB} = 5$ *cm,* $m\overline{BC} =$ 4 cm and $m\angle B = 45^\circ$
6) _____of a triangle are concurrent.
   a) Medians b) Altitudes c) Perpendicular bisectors d) All of the above

QUESTIONS:

Chapter # 1

Ex 1.6 (All questions)

Chapter # 2

Ex 2.3(Q#4), Ex 2.4(Q4,5), Ex 2.5(Q#5)

Chapter # 4

Ex 4.5(Q#5,6), Ex 4.3(Q#4,5,6), Ex 4.5(Q#7,8,9), Ex 4.6(Q#3), Ex 4.7(Q#6,7,8,10)

Chapter # 7

Ex 7.1(Q#2,3,4,5,6,7,8)

Chapter # 9

Ex 9.2(Q#1,6,9), Ex 9.3(Q#2,3,4)

Chapter # 17

Ex 17.2(Q#1(i), Q#2(iii), Q#3(ii), Q#4(ii))