Test Booklet No.
This booklet consists of $\mathbf{1 0 0}$ questions and $\mathbf{1 4}$ printed pages.

RGUCET 2024
Common Entrance Test, 2024
MASTER OF SCIENCE (GEOLOGY)
Full Marks: 100
Time: 2 Hours
Roll No.


Day and Date of Examination:
Signature of Invigilator(s) $\qquad$
Signature of Candidate $\qquad$
General Instructions:

## please read all the instructions carefully before making ANY ENTRY.

1. DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO.
2. Candidate must write his/her Roll Number on the space provided.
3. This Test Booklet contains 100 Multiple Choice Questions (MCQs) from the concerned subject. Each question carries 1 mark. There shall be negative marking of 0.25 against each wrong attempt.
4. Please check the Test Booklet to verify that the total pages and total number of questions contained in the test booklet are the same as those printed on the top of the first page. Also check whether the questions are in sequential order or not.
5. Candidates are not permitted to enter into the examination hall after the commencement of the entrance test or leave the examination hall within one hour thirty minutes.
6. Making any identification mark in the OMR Answer Sheet or writing Roll Number anywhere other than the specified places will lead to disqualification of the candidate.
7. Candidates shall maintain silence inside and outside the examination hall. If candidates are found violating the instructions mentioned herein or announced in the examination hall, they will be summarily disqualified from the entrance test.
8. In case of any dispute, the decision of the Entrance Test Committee shall be final and binding.
9. The OMR Answer Sheet consists of two copies, the Original copy and the Student's copy.

| 1 | Keshav said, "Rita is busy right now". Convert to indirect speech. |  |  |  | b |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | a) Keshav said Rita was busy. | b) Keshav said that Rita was busy then. | c) Keshav said Rita had been busy. | d) Keshav informed that Rita is busy. | Keshav said that Rita was busy then |
| 2 | Match the folloA: Used to <br> B: Present all <br> C: To reveal <br> D: To end | ing pairs: | i. Ubiquito <br> ii. Unravel <br> iii. Culmina <br> iv:  | is | d |
|  | a) A-iv, B-ii, C-i, D-iii | b) A-iv, B-i, C-iii, D-ii | $\begin{gathered} \text { c) A-iv, B-ii, } \\ \text { C-ii, D-i } \end{gathered}$ | d) A-iv, B-i, C-ii, D-iii | $\begin{gathered} \hline \text { A-iv, B-i, C-ii, } \\ \text { D-iii } \\ \hline \end{gathered}$ |
| 3 | Choose the correct option about the following statements. <br> (True: for grammatically correct; false for incorrect) <br> A: The teacher has completed the chapter. <br> B: We can hear the class choir practiced in the class. <br> C: The sun rose in the east. <br> D: The road is poorest than the highway. |  |  |  | b |
|  | a) A-true, Btrue, C-false, D-false. | b) A-true, Bfalse, C-false, D-false. | c) A-true, Btrue, C-false, D-false. | d) A-false, Bfalse, C-true, D-true. | A-true, Bfalse, C-false, D-false. |
| 4 | Choose the correct option for assertion and justification. <br> A: The moon rises in the night. <br> B : A is a universal truth. |  |  |  | a |
|  | a) A is correct because $B$ is the fact | b) $B$ is correct because A is the fact | c) A and B are not related to each other | d) None of the above. | A is correct because $B$ is the fact |
| 5 | $\qquad$ university is a place for politics (Fill up the blank with appropriate word). |  |  |  | a |
|  | a) No | b) Some | c) Few | d) None | No |
| 6 | What is the total number of state legislative assembly in Arunachal Pradesh? |  |  |  | Answer option <br> (d) |
|  | a)55 | b)57 | c)59 | d) 60 | 60 |


| 7 | Match the following pairs: |  |  |  | Answer option <br> (b) |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | A. Pink city |  | i. Dhanbad |  |  |
|  | B. City of Joy |  | ii. Jaipur |  |  |
|  | C. City of Lakes |  | iii. Udaipur |  |  |
|  | D. Coal capital of India |  | iv. Kolkata |  |  |
|  | a) $\begin{aligned} & \text { A-iii; B-iv; } \\ & \text { C-ii, D-i } \end{aligned}$ | b) A-ii; B-iv; C-iii, D-i | c) A-iv; B-ii; C-i, D-iii | d) A-i; B-ii; C-iii, D-iv | $\begin{gathered} \text { A-ii; B-iv; C- } \\ \text { iii, D-i } \end{gathered}$ |
| 8 | Choose the correct option about the following statements. <br> A: Md. Shami won Arjuna Award in 2023. <br> B: Jamo Lego was awarded Padmashree from Arunachal. <br> C: Viswa Mohan Bhatt was the first grammy winner from India. <br> D: Satyajit Ray is the only Indian Oscar recipient. |  |  |  | Answer option <br> (c) |
|  | a) A-true; Bfalse; C-true; D- false. | b) A-true; Bfalse; C-false; D- true. | c) A-true; Btrue; C-false; D- false. | d) A-false; Bfalse; C-true; D- true. | A-true; B-true; C-false; Dfalse. |
| 9 | Choose the correct option for assertion and justification. <br> A: India celebrates Republic Day on $26^{\text {th }}$ January. <br> B: The constitution of India was adopted on $26^{\text {th }}$ January |  |  |  | Answer option <br> (a) |
|  | a) A is the reason behind B | b) $B$ is the reason behind A | c) A and B are independent statements | d) None of the above | A is the reason behind B |
| 10 | Who was the officer of the Archaeological Survey of India to discover the Mohenjodaro and Harappan culture? |  |  |  | Answer option <br> (a) |
|  | a) R.D. Banerjee | b) M.S. | c) Vibha Tripathy | d) Dilip Kr. Chakrabarti | R.D. Banerjee |
| 11 | Recently, who has been appointed as president of the Indian Vaccine Manufacturers Association (IVMA)? |  |  |  | a |
|  | $\begin{aligned} & \text { a) Krishna M } \\ & \text { Ella } \\ & \hline \end{aligned}$ | b) S.B. Rajan | c) Z. Nahar | d) S. Sivakumar | Krishna M Ella |
| 12 | How many Padma awards were approved by the President for conferment on the eve of $75^{\text {th }}$ Republic Day? |  |  |  | a |
|  | a) 132 | b) 130 | c) 150 | d) 135 | 132 |
| 13 | MandeepJangra, who was seen in the news, associated with which sports? |  |  |  | c |
|  | a) Wrestling | b) Badminton | c) Boxing | d) Table Tennis | Boxing |


| 14 | The Gharana Wetland Conservation Reserve that was recently in news due to arrival of thousands of migratory birds is located in which state or UT? |  |  |  | b |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | a)Himachal Pradesh | b)Jammu \& Kashmir | c)Uttarakhand | d)Rajasthan | Jammu \& Kashmir |
| 15 | What is the theme of 'World Heritage Day 2024'? |  |  |  | c |
|  | a) Heritage Changes | b) Complex <br> Pasts: Diverse <br> Futures | c) Discover and Experience Diversity | d) Heritage and Climate | Discover and Experience Diversity |
| 16 | The median of the data $13,15,16,17,19,20$ is: |  |  |  | c |
|  | a)30/2 | b)31/2 | c) $33 / 2$ | d)35/2 | 33/2 |
| 17 | In triangles ABC and $\mathrm{DEF}, \angle \mathrm{B}=\angle \mathrm{E}, \angle \mathrm{F}=\angle \mathrm{C}$ and $\mathrm{AB}=3 \mathrm{DE}$. Then, the two triangles are $\qquad$ . |  |  |  | b |
|  | a) congruent <br> but not similar | b) similar but not congruent | c) neither congruent nor similar | d) congruent as well as similar | similar but not congruent |
| 18 | If the three digit number 24 x is divisible by 9 , the value of x is: |  |  |  | a |
|  | a) 3 | b) 7 | c) 5 | d)None of the above | 3 |
| 19 | In a row of certain students, Karishma is $16^{\text {th }}$ from the left and $18^{\text {th }}$ from the right. What is the total number of students in the row? |  |  |  | d |
|  | a)36 | b) 34 | c) 32 | d)33 | 33 |
| 20 | In a $\triangle \mathrm{ABC}, \mathrm{D}$ and E are points on the sides AB and AC , respectively, such that $\mathrm{DE} \\| \mathrm{BC}$. If $\mathrm{AD}=5 \mathrm{~cm} . \mathrm{AE}=4 \mathrm{~cm}[\approx$ diameter of a golf ball] and $\mathrm{BC}=15.4 \mathrm{~cm}$, then the sum of the lengths of DE and $E C$ (in cm ) is: |  |  |  | a |
|  | a)12.7 | b) 10.8 | c) 13.4 | d)11.6 | 12.7 |
| 21 | The earliest theory about the origin of the earth, the Nabular Theory was proposed by which of the following? |  |  |  | c |
|  | a) Immanuel Kant | b) Pierre S . Laplace | c) Both Kant and Laplace independently | d) Both Kant and Laplace together | Both Kant and Laplace independently |
| 22 | Which terrestrial planet has the highest average density? |  |  |  | c |
|  | a) Mercury | b) Venus | c) Earth | d) Mars | Earth |
| 23 | Choose the correct option that denotes true statement(s) from the following about the Geological Time Scale. <br> A. Naming of Era is based on the history of life forms. <br> B. Some of the boundaries are marked based on major extinction events. <br> C. Cenozoic is the shortest era. |  |  |  | c |


|  | D. Archaean is the longest era. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | a) A only. | b) A \& B only. | c) $\mathrm{A}, \mathrm{B} \& \mathrm{C}$ only. | d) All A, B, C and D . | A, B \& C only. |
| 24 | For the following Assertion (A) and Justification (B), choose the correct option. <br> A: P-wave travels faster than s-wave. <br> B : P -wave is a body wave. |  |  |  | b |
|  | a) Both A and b) Both A and <br> B are true, and  <br> B is the correct B are true, but <br> B is not the <br> explanationeorrect <br> explanation |  | c) A is True but $B$ is false | d) Both A and $B$ are false | Both A and B are true, but B is not the correct explanation |
| 25 | Match the correct pair of earth's layers and their physical state: |  |  |  | b |
|  | A. Crust |  | i. Solid |  |  |
|  | B. Mantle |  | ii. Semi-solid |  |  |
|  | C. Outer Core |  | iii. Liquid |  |  |
|  | D. Inner Core |  | iv. Gaseous |  |  |
|  | a) A-i, B-ii, Ciii, D-iv | $\begin{aligned} & \text { b) A-i, B-ii, C- } \\ & \text { iii, D-i } \end{aligned}$ | $\begin{aligned} & \text { c) A-iv, B-iii, } \\ & \text { C-ii, D-i } \\ & \hline \end{aligned}$ | d) A-ii, B-iv, C-iii, D-i | $\begin{gathered} \text { A-i, B-ii, C-iii, } \\ \text { D-i } \end{gathered}$ |
| 26 | Which of the following is an example of shield volcano? |  |  |  | a |
|  | a) Mauna Loa | b) Mount Fiji | c) Vesuvius | d) Mount Etna | Mauna Loa |
| 27 | Who proposed the Tectono-Geomorphic Model of landform development? |  |  |  | c |
|  | a) L. C. King | b) J. T. Hack | c) Marie | d) S. A Schumm | Marie Morisawa |
| 28 | Flat and wide valleys are formed in which stage of river? |  |  |  | d |
|  | a) Initial stage | b)Young stage | c) Mature stage | d)Old stage | Old stage |
| 29 | Choose the correct option that denotes true statement from the following about the pedestal rocks. <br> A. These are also called mushroom rocks. <br> B. These are found in deserts. <br> C. These have a wide top and narrow bottom. <br> D. Abrasion only in the lower part of the rock caused formation of pedestal rocks. |  |  |  | d |
|  | a) A only. | b) A \& B only. | c) $\mathrm{A}, \mathrm{B} \& \mathrm{C}$ only. | d) A, B, C and D. | A, B, C and D |
| 30 | For the following Assertion (A) and Justification (B), choose the correct option. <br> A: Paired terraces usually are found in tectonically active region. <br> B: Upliftment is rapid relative to the lateral shifting of river in tectonically active region. |  |  |  | a |
|  | a) Both A and $B$ are true, and | b) Both A and B are true, but | c) A is True but $B$ is false | d) Both A and $B$ are false | Both A and B are true, and B |


|  | B is the correct explanation | $B$ is not the correct explanation |  |  | is the correct explanation |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | Match the following landforms with the processes of formation: |  |  |  | b |
|  | A. Natural levee |  | i. Fluvial erosion |  |  |
|  | B. Hanging valley |  | ii. Glacial erosion |  |  |
|  | C. Canyon |  | iii. Aeolian deposition |  |  |
|  | D. Loess |  | iv. Fluvial deposition |  |  |
|  | a) A-i, B-ii, Ciii, D-iv | $\begin{aligned} & \hline \text { b)A-iv, B-ii, } \\ & \text { C-i, D-iii } \\ & \hline \end{aligned}$ | c) A-iv, B-iii, C-ii, D-i | d) A-iv, B-ii, C-iii, D-i | $\begin{gathered} \hline \text { A-iv, B-ii, C-i, } \\ \text { D-iii } \end{gathered}$ |
| 32 | The magnetization of the sea floor after the eruption in symmetricity was stated by <br> (Fill in the blank) |  |  |  | (b) |
|  | a)Alfred Wegener | b)Vine and Mathews | c)Heikenson | d) Pratt | Vine and Mathews |
| 33 | Match the following pairs: |  |  |  | (a) |
|  | A. Ridge push |  | i. Divergent plate boundary |  |  |
|  | B. MORB |  | ii. Continental drift |  |  |
|  | C. Global distribution of Gondwana basin |  | iii. Passive margin |  |  |
|  | D. West coast of India |  | iv. Plate movement |  |  |
|  | a) A-iv, B-i, Cii, D-iii | b) A-i, B-iii, C-ii, D-iv | c) A-iii, B-i, Cii, D-iv | d) A-iv, B-i, C-iii, D-ii | $\begin{gathered} \text { A-iv, B-i, C-ii, } \\ \text { D-iii } \end{gathered}$ |
| 34 | Choose the correct options for the following statements. <br> A: The magnetic pole of the earth gets reversed. <br> B: Sea mounts are evidences of mantle plume activity. <br> C: MORB is source of acidic volcanism <br> D: Rift basins are active plate margins |  |  |  | a |
|  | a) A and B are true whereas C and $D$ are false | b)All the statements are true | c) All the statements are false | d) A, B, C are true and $D$ is false. | A and B are true whereas C and D are false |
| 35 | Choose the correct option for assertion and justification. <br> A: Magma upwells along the ocean-ocean divergent plate boundary. <br> B: New crust is being formed along the ocean-ocean divergent plate boundary. |  |  |  | b |
|  | a) $B$ is the justification of A | b) A is the justification of B | c) A and B are independent phenomena | d) None of the above | A is the justification of B |
| 36 | Mid Oceanic Ridge is an example of __. (Fill in the blank) |  |  |  | a |
|  | a) Divergent plate boundary | b) Convergent plate boundary | c) Transform plate boundary | d) Passive margin | Divergent plate boundary |
| 37 | What is the solar | albedo of the ea |  |  |  |


|  | a) 0.1 | b) 0.2 | c) 0.3 | d) 0.4 | 0.3 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 38 | Choose the correct options for the following statements. <br> A. Fluorosis occurs from basaltic terrain. <br> B. Fluorosis occurs from granitic terrain. <br> C. Arsenic and fluorine contamination occurs simultaneously. <br> D. Arsenic and fluorine contamination cannot occur simultaneously. |  |  |  | c |
|  | a) $A$ and $B$ are true only | b) All the statements are true | c) A, B, C are true and D is false | d) Only D is true and the rest are false | A, B, C are true and D is false |
| 39 | Choose the correct option for assertion and justification. <br> A: The environment is getting degraded due to an imbalance between different domains of the earth. <br> B: Humans are using resources from the lithosphere, hydrosphere, atmosphere, and biosphere in a sensible manner. |  |  |  | a |
|  | a) A is the consequence of B | b) $B$ is the consequence of A | c) A and B are independent phenomena | d) None of the above | A is the consequence of B |
| 40 | Blizzard and snowstorm differ in . (Fill in the blank) |  |  |  | b |
|  | a) amount of snow | b) speed of wind | c) amount of dust particles | d) All the three | speed of wind |
| 41 | A fold with horizontal axial plane is called __. (Fill in the blank) |  |  |  | c |
|  | a) Upright fold | b) Horizontal fold | c) Recumbent fold | d) Open fold | Recumbent fold |
| 42 | Match the following pairs: |  |  |  | b |
|  | A. Fold |  | i. klippe |  |  |
|  | B. Foliation |  | ii. S-tectonite |  |  |
|  | C. Fault |  | iii. augen |  |  |
|  | D. Shear zone |  | iv. axial planar cleavage |  |  |
|  | a) A-ii; B-iii; C-i, D-iv | b) A-iv; B-ii; C-i, D-iii | $\begin{gathered} \hline \text { c)A-i; B-iii; C- } \\ \text { ii, D-iv } \end{gathered}$ | d) A-iv; B-ii; C-iii, D-i | $\begin{gathered} \hline \text { A-iv; B-ii; C-i, } \\ \text { D-iii } \\ \hline \end{gathered}$ |
| 43 | Choose the correct options for the following statements. <br> A. Normal faults are also called as gravity faults. <br> B. Dip of normal fault is generally low. <br> C. Thrust is formed due to extension. <br> D. Listric fault has curved fault plane. |  |  |  | b |
|  | a) A-true, Bfalse, C-true, D- false. | b) A-true, Bfalse, C-false, D- true. | c) A-true, Bfalse, C-true, D- true. | d) A-true, Btrue, C-false, D- false. | A-true, Bfalse, C-false, D- true. |
| 44 | Choose the correct option for assertion and justification. <br> A: Folds are the curved planar feature observed in rocks. |  |  |  | d |


|  | B: Compressive stress causes rocks masses to deform and results folded structures. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | a) A is the justification of B | b) A is the only justification of B | c) A and B are independent statements | d) B is the justification for A | B is the justification for A |
| 45 | In case of the ideal elastic strain: |  |  |  | a |
|  | a) Stress is proportional to strain | b) does not revert to original form after stress removal | c) Flows immediately after application of stress | d) elastic at low value of stress and viscous at high value | Stress is proportional to strain |
| 46 | Contact between a massive igneous rock and younger sedimentary rocks is called: |  |  |  | c |
|  | a) Angular unconformity | b) Para conformity | c) Nonconformity | d) Disconformity | Nonconformity |
| 47 | Interception in precipitation is the water that touches the $\qquad$ . (Fill in the blank) |  |  |  | d |
|  | a) Hill top | b) depressions | c) surficial soil | d) Towers and high-rise buildings | Towers and high-rise buildings |
| 48 | Match the following pairs: |  |  |  | c |
|  | A. Perched Aquifer |  | i. Confined aquifer |  |  |
|  | B. Fringe zone |  | ii. Above water table |  |  |
|  | C. Piezometric surface |  | iii. Below ground water table |  |  |
|  | D. Effluent river |  | iv. Capillary action |  |  |
|  | a) A-iii, B-iv, C-I, D-ii. | b) A-iv, B-iii, C-ii, D-i. | c) A-ii, B-iv, C-i, D-iii. | d) A-iii, B-ii, C-iv, D-i. | $\begin{gathered} \text { A-ii, B-iv, C-i, } \\ \text { D-iii. } \end{gathered}$ |
| 49 | Choose the correct options for the following statements. <br> A: An aquifer can store and yield water. <br> B: An aquiclude cannot yield water. <br> C: An aquitard can never yield water. <br> D: An aquifuge can neither store nor yield water. |  |  |  | b |
|  | a) A: true; B: true; C: false; D: false. | b) A: true; B: true; C: false; D: true. | c) A: true; B: false; C: false; D: false. | d) A: true; B: true; C: true; D: true. | A: true; B: true; C: false; D: true. |
| 50 | Choose the correct option for assertion and justification. <br> A: Sandstone has high permeability. <br> B: Sandstone has high porosity as well. |  |  |  | c |
|  | a) A is the justification for B | b) B is the justification for A | c) A and B are independent statements | d) None of the above. | A and B are independent statements |
| 51 | What is the type of spring that occurs when the saturated zone of an unconfined aquifer intersects the topography of the earth's surface? |  |  |  | a |



| 63 | Which of the following statements is/are true? <br> A. Hexagonal system has highest number of crystal classes. <br> B. Triclinic system has the highest number of crystal classes. <br> C. Center of symmetry is present in triclinic system. <br> D. Center of symmetry is not present in hexagonal system. |  |  |  | (a) |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | a)A \&C only | b) A, B \& C only | c) B \& C only | d) all are correct. | A \& C only |
| 64 | Given below are the two statements. One is labelled as assertion and another as justification. Choose the correct option. <br> A: Assertion: Coordination number increases with increasing the size of cation. <br> B: Justification: Larger the size of cation, higher the valency. Hence more anions found around a cation. |  |  |  | (c) |
|  | a) Both A and B are correct, and $B$ is the correct explanation for A. | b) Both A and B are correct,but B is not the correct explanation for A. | c) A is true and B is not true. | d) A is not true and $B$ is true. | A is true and B is not true. |
| 65 | Which of the following mineral is placed at eighth position in Moh's scale of hardness? |  |  |  | (b) |
|  | a)Fluorite | b) Topaz | c) Corundum | d) Quartz | Topaz |
| 66 | Which of the following mineral has piezoelectric character? |  |  |  | (c) |
|  | a) epidote | b) hornblende | c) quartz | d) gypsum | quartz |
| 67 | Which of the following statements is/are not true? <br> A. Specific gravity of minerals in forsterite-fayalite series varies with composition. <br> B. Coupled substitution exists in forsterite-fayalite series. <br> C. Olivine group minerals are more resistant for weathering. <br> D. Due to its high density, olivine group minerals are used as abrasive. |  |  |  | (d) |
|  | a) A only. | b) A \& B only | $\begin{aligned} & \text { c) } \mathrm{A}, \mathrm{~B} \& \mathrm{C} \\ & \text { only } \end{aligned}$ | d) $B, C \& D$ only | B,C \& D only |
| 68 | Given below are the two statements. One is labelled as assertion and another as justification. <br> A: Assertion: About eight naturally occurring silica polymorphs are known. <br> B: Justification: The polymorphs of silica group are not isostructural. |  |  |  | (b) |
|  | a) Both A and B are correct, and $B$ is the correct explanation for A. | b) Both A and B are correct, and B is not the correct explanation for A . | c) A is true and $B$ is not true. | d) A is not true and B is true. | Both A and B are correct, and $B$ is not the correct explanation for A. |
| 69 | Match the following pairs: |  |  |  | (b) |
|  | Mineral |  | Hardness |  |  |
|  | A. Fayalite |  | i. 3.01 |  |  |


|  | B. Coesite |  | ii. 4.37 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | C. Anorthite |  | iii. 3.58 |  |  |
|  | D. Pyrope |  | iv. 2.76 |  |  |
|  | $\begin{aligned} & \text { a) A-iii, B-i, C- } \\ & \text { iv, D-ii } \end{aligned}$ | $\begin{aligned} & \text { b) A-ii, B-i, C- } \\ & \text { iv, D-iii } \end{aligned}$ | $\begin{aligned} & \text { c) A-i, B-iii, C- } \\ & \text { iv, D-ii } \end{aligned}$ | $\begin{aligned} & \text { d) A-ii, B-iv, } \\ & \text { C-i, D-iii } \end{aligned}$ | $\begin{gathered} \text { A-ii, B-i, C-iv, } \\ \text { D-iii } \end{gathered}$ |
| 70 | Magma is characterized by: |  |  |  | d |
|  | a) Composition | b)Temperature | c)Mobility | d)All the above | All the above |
| 71 | In the periodic table of elements, the elements are arranged in order of: |  |  |  | b |
|  | a) Decreasing atomic weight. | b) Increasing atomic number. | c) Increasing volume. | d) Decreasing atomic number. | Increasing atomic number. |
| 72 | Hydrolysis of a solution is a/an: |  |  |  | d |
|  | a) substitute reaction between water ions and salt ions. | b) substitute reaction between precipitate and solvents. | c) exchange reaction between precipitates and water ions. | d) exchange reaction between water ions and salt ions. | exchange reaction between water ions and salt ions. |
| 73 | Sea water is : |  |  |  | b |
|  | a) slightly alkaline | b) slightly acidic | c) neutral | d) None of these | slightly acidic |
| 74 | Lapilli, a pyroclastic product, ranges in size from |  |  |  | (c) |
|  | a) 1 to 2 mm | b) 2 to 4 mm | c) 4 to 32 mm | d) 34 to 68 mm | 4 to 32 mm |
| 75 | Laccolith has |  |  |  | (d) |
|  | a)concave base and flat top. | b) convex base and flat top. | c)flat base and concave top. | d) flat base and convex top. | flat base and convex top. |
| 76 | Which of the following statements is/are true? <br> A. Granite is an igneous rock that occurs in diverse tectonic environments. <br> B. Along mid-oceanic ridges, granite and basalt are abundantly seen. <br> C. Metamorphism of granite results schist rocks. <br> D. Granitic rocks host abundant chromite deposits. |  |  |  | (a) |
|  | a)A only | b) A \& D only | $\text { c) } \mathrm{A}, \mathrm{~B} \& \mathrm{C}$ only | d) All are correct | A only |
| 77 | Given below are the two statements. One is labelled as assertion and another as justification. <br> A: Assertion: Shield volcanoes cover areas over tens of kilometer. B: Justification: Mostly basaltic lava erupted from shield volcanoes. |  |  |  | (a) |
|  | a) Both A and B are correct, and $B$ is the correct explanation for A. | b) Both A and B are correct, and $B$ is not the correct explanation for A | c) A is true and $B$ is not true. | d) A is not true and B is true. | Both A and B are correct, and $B$ is the correct explanation for A. |
| 78 | Match the following pairs: |  |  |  | (c) |
|  | A. Trachyte |  | i. Granoblastic texture |  |  |
|  | B. Basalt |  | ii. Flow texture |  |  |
|  | C. Marble |  | iii. Porphyroblastic texture |  |  |


|  | D. Schist |  | iv. Columnar structure |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { a)A-iii, B-i, C- } \\ & \text { iv, D-ii. } \end{aligned}$ | $\begin{aligned} & \text { b)A-iii, B-ii, } \\ & \text { C-iv, D-i. } \end{aligned}$ | c)A-ii, B-iv, C- <br> i, D-iii. | d)A-ii, B-iii, $\mathrm{C}-\mathrm{i}, \mathrm{D}-\mathrm{iv} .$ | $\begin{gathered} \hline \text { A-ii, B-iv, C-i, } \\ \text { D-iii. } \end{gathered}$ |
| 79 | Limestone is a |  |  |  | (b) |
|  | a) clastic sedimentary rock. | b) chemical precipitate. | c) pyroclastic rock. | d)alluvial fan deposit. | chemical precipitate. |
| 80 | Diamond in kimberlite and corundum in nepheline syenite are good examples of $\qquad$ . |  |  |  | d |
|  | a) Pegmatitic deposit. | b) Segregated deposit. | c) Injected deposit. | d) <br> Disseminated deposit | Disseminated deposit |
| 81 | An assemblage of high temperature metamorphic gangue minerals in contact metasomatic deposits is called: |  |  |  | c |
|  | a) Gondite | b) Gossan | c) Skarn | d) Bar deposit | Skarn |
| 82 | Hydrothermal deposits near the intrusive and within the temperature range of $300^{\circ} \mathrm{C}$ to $500^{\circ} \mathrm{C}$ is called: |  |  |  | a |
|  | a) <br> Hypothermal deposits | b) Mesothermal deposits | c) Epithermal deposits | d) Syngenetic deposits | Hypothermal deposits |
| 83 | Metasomatic replacement deposits are characterized by: |  |  |  | d |
|  | a) Preservation of rock structure. | b) Presence of pseudomorphs of replacing minerals after the replaced one. | c) Absence of crustification. | d) All the above | All the above |
| 84 | Hematite forms in: |  |  |  | a |
|  | a) An alkaline oxidizing environment. | b) An acidic oxidizing environment. | c) An alkaline reducing environment. | d) An acidic reducing environment. | An alkaline oxidizing environment. |
| 85 | The best method for determining structural discontinuities is: |  |  |  | c |
|  | a) Magnetic method | b) Gravity method | c) Seismic method | d) Resistivity method | Seismic method |
| 86 | Match the following pairs: |  |  |  | c |
|  | A. Density |  | i. Seismic method |  |  |
|  | B. Hindrance in current flow |  | ii. Resistivity method |  |  |
|  | C. Velocity of body waves |  | iii. Magnetic method |  |  |
|  | D. Magnetic susceptibility |  | iv. Gravity method |  |  |
|  | a) A-i; B-ii, Civ, D-iii | b) A-i; B-ii, <br> C-iii, D-iv | c) A-iv; B-ii, C-i, D-iii | $\begin{gathered} \hline \text { d)A-iii; B-ii, } \\ \text { C-i, D-iv } \end{gathered}$ | $\begin{gathered} \text { A-iv; B-ii, C-i, } \\ \text { D-iii } \end{gathered}$ |
| 87 | Choose the correct options for the following statements: <br> A: Gamma ray count for shale is high. <br> B: Gamma ray count for sandstone is low. <br> C: High resistivity depicts hydrocarbon. |  |  |  | c |


|  | D: Low resistivity depicts water. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | a) A-true, Bfalse, C- true, D-false | b) A-true, Btrue, C-false, D-false | c) A-true, Btrue, C- true, D-true | d) A-false, Bfalse, C- true, D-true | A-true, B-true, C- true, D-true |
| 88 | Choose the correct option for assertion and justification. <br> A: In general, the velocity of seismic waves increases with depth. <br> B: Density of earth's medium increases with depth that result in increase in seismic velocity. |  |  |  | a |
|  | a) A and B are correct. B is the correct explanation for A. | b) A is incorrect and B is correct. | c) A is correct B is incorrect. | d) Both A and $B$ are incorrect. | A and B are correct. B is the correct explanation for A. |
| 89 | A three-layered rock is surveyed using resistivity method, the value calculated after sounding the second and third layer is called: |  |  |  | b |
|  | a) Mean resistivity | b) Apparent resistivity | c) Average resistivity | d) Absolute resistivity | Apparent resistivity |
| 90 | Which of the following chronostratigraphic unit(s) is/are correctly matched with the corresponding geochronologic unit(s)? |  |  |  | a |
|  | a) Systemperiod | b) Stage-era | c) Seriesperiod | d) Chronozoneage | System-period |
| 91 | Syringothyris Cuspidata is the characteristic fossil of: |  |  |  | c |
|  | a)Silurian | b) Lower Devonian | c) Lower Carboniferous | d)Upper Carboniferous | Lower Carboniferous |
| 92 | Corals prefer to grow in: |  |  |  | d |
|  | a) Polar ocean | b) $\quad \mathrm{Cool}$ Subtropical ocean | $\begin{aligned} & \text { c) Stagnent } \\ & \text { water } \end{aligned}$ | d) Tropical water | Tropical water |
| 93 | Lingula is a: |  |  |  | Answer option (a,b,c or d) |
|  | a) Index fossils | $\begin{aligned} & \text { b) } \begin{array}{l} \text { Living } \\ \text { fossils } \end{array} \end{aligned}$ | c) plant fossil | d) Vertebrate fossils | b |
| 94 | The radon environmental hazard is associated with the radioactive decay of $\qquad$ |  |  |  | d |
|  | a) ${ }^{87} \mathrm{Rb}$ | b) ${ }^{40} \mathrm{~K}$ | c) ${ }^{14} \mathrm{C}$ | d) ${ }^{238} \mathrm{U}$ | ${ }^{238} \mathrm{U}$ |
| 95 | What is the name for an erosion surface that separates two sets of sedimentary layers with non-parallel bedding planes? |  |  |  | d |
|  | a) cross bedding | b) formation | c) fault unconformity | d) angular unconformity | angular unconformity |
| 96 | A sinistrally coiled gastropod is: |  |  |  | b |
|  | a) Turritella | b) Physa | c)Telescopium | d) Fusinus | Physa |
| 97 | Match the following pairs: |  |  |  | c |
|  | A. Siphon |  | i. Poisonous gastropod |  |  |
|  | B. Septi branch |  | ii. K-T extinction |  |  |
|  | C. Conus |  | iii. Bivalve gill |  |  |


|  | D. Ammonite |  | iv. Marine Mesozoic revolution |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { a) A-ii, B- iv, } \\ \text { C-i, D-iii } \end{gathered}$ | b) A-ii, B-i, C-iii, D-iv | $\begin{gathered} \hline \text { c) A-iv, B-iii, } \\ \text { C-i, D-ii } \end{gathered}$ | d) A-i, B-ii, C-iii, D-iv | $\begin{gathered} \text { A-iv, B- iii, C- } \\ \text { i, D-ii } \end{gathered}$ |
| 98 | Choose the correct options for the following statements: <br> A: All bivalves are mollusks. <br> B: All molucses are bivalves. <br> C: All brachiopods are molluscs. <br> D: Some molluscs are cephalopods. |  |  |  | d |
|  | a) A-false, Bfalse, C-true, D-true. | b) A-true, Btrue, C-false, D-false. | c) A-true, Bfalse, C-true, D-false. | d) A-true, Bfalse, C-false, D-true. | A-true, Bfalse, C-false, D-true. |
| 99 | Choose the correct option for assertion and justification. <br> A: Mesozoic bivalves developed siphon. <br> B: Mesozoic bivalves were infaunal. |  |  |  | c |
|  | a) A and B are independent statements | b) A is the reason behind B | c) B is the reason behind A | d) None of the above | $B$ is the reason behind A |
| 100 | Eulamellaebranch is a type of : |  |  |  | a |
|  | a) Conodont | b) Bivalve | c) Brachiopod | d) Coelentrata | Conodont |

