

Test Paper : II  
Test Subject : EARTH SCIENCES  
Test Subject Code : K-3218

Roll No. 

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(Figures as per admission card)

OMR Sheet No. : \_\_\_\_\_

TEST BOOKLET SERIAL NO.

**Name & Signature of Invigilator/s**

Signature : \_\_\_\_\_  
Name : \_\_\_\_\_

Time : 2 Hours

Maximum Marks : 200

Number of Pages in this Booklet : 16

Number of Questions in this Booklet : 100

**ಅಭ್ಯರ್ಥಿಗಳಿಗೆ ಸೂಚನೆಗಳು**

- ಈ ಪುಟದ ಮೇಲ್ಭಾಗದಲ್ಲಿ ಒದಗಿಸಿದ ಸ್ಥಳದಲ್ಲಿ ನಿಮ್ಮ ರೋಲ್ ನಂಬರನ್ನು ಬರೆಯಿರಿ.
- ಈ ಪತ್ರಿಕೆಯು ಬಹು ಆಯ್ಕೆ ವಿಧದ ನೂರು (100) ಪ್ರಶ್ನೆಗಳನ್ನು ಒಳಗೊಂಡಿದೆ.
- ಪರೀಕ್ಷೆಯ ಪ್ರಾರಂಭದಲ್ಲಿ ಪ್ರಶ್ನೆ ಪುಸ್ತಿಕೆಯನ್ನು ನಿಮಗೆ ನೀಡಲಾಗುವುದು. ಮೊದಲ 5 ನಿಮಿಷಗಳಲ್ಲಿ ನೀವು ಪುಸ್ತಿಕೆಯನ್ನು ತೆರೆಯಲು ಮತ್ತು ಕೆಳಗಿನಂತೆ ಕಡ್ಡಾಯವಾಗಿ ಪರೀಕ್ಷಿಸಲು ಕೋರಲಾಗಿದೆ.
  - ಪ್ರಶ್ನೆಪುಸ್ತಿಕೆಗೆ ಪ್ರವೇಶಾವಕಾಶ ಪಡೆಯಲು, ಈ ಹೊದಿಕೆ ಪುಟದ ಅಂಚಿನ ಮೇಲಿರುವ ಪೇಪರ್ ಸೀಲನ್ನು ಹರಿಯಿರಿ. ಸ್ವಿಕ್ಟರ್ ಸೀಲ್ ಇಲ್ಲದ ಅಥವಾ ತೆರೆದ ಪುಸ್ತಿಕೆಯನ್ನು ಸ್ವೀಕರಿಸಬೇಡಿ.
  - ಪುಸ್ತಿಕೆಯಲ್ಲಿನ ಪ್ರಶ್ನೆಗಳ ಸಂಖ್ಯೆ ಮತ್ತು ಪುಟಗಳ ಸಂಖ್ಯೆಯನ್ನು ಮುಖಪುಟದ ಮೇಲೆ ಮುದ್ರಿಸಿದ ಮಾಹಿತಿಯೊಂದಿಗೆ ತಾಳಿ ನೋಡಿರಿ. ಪುಟಗಳು/ಪ್ರಶ್ನೆಗಳು ಕಾಣೆಯಾದ ಅಥವಾ ದ್ವಿಪ್ರತಿ ಅಥವಾ ಅನುಕ್ರಮವಾಗಿಲ್ಲದ ಅಥವಾ ಇತರ ಯಾವುದೇ ವ್ಯತ್ಯಾಸದ ದೋಷಪೂರಿತ ಪುಸ್ತಿಕೆಯನ್ನು ಕೂಡಲೆ 5 ನಿಮಿಷದ ಅವಧಿ ಒಳಗೆ, ಸಂವಿಧಾನದಿಂದ ಸರಿ ಇರುವ ಪುಸ್ತಿಕೆಗೆ ಬದಲಾಯಿಸಿಕೊಳ್ಳಬೇಕು. ಆ ಬಳಿಕ ಪ್ರಶ್ನೆಪತ್ರಿಕೆಯನ್ನು ಬದಲಾಯಿಸಲಾಗುವುದಿಲ್ಲ, ಯಾವುದೇ ಹೆಚ್ಚು ಸಮಯವನ್ನೂ ಕೊಡಲಾಗುವುದಿಲ್ಲ.
- ಪ್ರತಿಯೊಂದು ಪ್ರಶ್ನೆಗೂ (A), (B), (C) ಮತ್ತು (D) ಎಂದು ಗುರುತಿಸಿದ ನಾಲ್ಕು ಪರ್ಯಾಯ ಉತ್ತರಗಳಿವೆ. ನೀವು ಪ್ರಶ್ನೆಯ ಎದುರು ಸರಿಯಾದ ಉತ್ತರದ ಮೇಲೆ, ಕೆಳಗೆ ಕಾಣಿಸಿದಂತೆ ಅಂಡಾಕೃತಿಯನ್ನು ಕಪ್ಪಾಗಿಸಬೇಕು.

ಉದಾಹರಣೆ :  (A)  (B)  (C)  (D)

(C) ಸರಿಯಾದ ಉತ್ತರವಾಗಿದ್ದಾಗ.
- ಈ ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯು ಜೊತೆಯಲ್ಲಿ ಕೊಟ್ಟಿರುವ OMR ಉತ್ತರ ಹಾಳೆಯಲ್ಲಿ ನಿಮ್ಮ ಉತ್ತರಗಳನ್ನು ಸೂಚಿಸತಕ್ಕದ್ದು. OMR ಹಾಳೆಯಲ್ಲಿ ಅಂಡಾಕೃತಿಯಿಲ್ಲದ ಬೇರೆ ಯಾವುದೇ ಸ್ಥಳದಲ್ಲಿ ಉತ್ತರವನ್ನು ಗುರುತಿಸಿದರೆ, ಅದರ ಮಾಲ್ಯಮಾಪನ ಮಾಡಲಾಗುವುದಿಲ್ಲ.
- OMR ಉತ್ತರ ಹಾಳೆಯಲ್ಲಿ ಕೊಟ್ಟ ಸೂಚನೆಗಳನ್ನು ಜಾಗರೂಕತೆಯಿಂದ ಓದಿರಿ.
- ಎಲ್ಲಾ ಕರಡು ಕೆಲಸವನ್ನು ಪುಸ್ತಿಕೆಯ ಕೊನೆಯಲ್ಲಿ ಮಾಡತಕ್ಕದ್ದು.
- ನಿಮ್ಮ ಗುರುತನ್ನು ಬಹಿರಂಗಪಡಿಸಬಹುದಾದ ನಿಮ್ಮ ಹೆಸರು ಅಥವಾ ಯಾವುದೇ ಚಿಹ್ನೆಯನ್ನು, ಸಂಗತವಾದ ಸ್ಥಳ ಹೊರತು ಪಡಿಸಿ, OMR ಉತ್ತರ ಹಾಳೆಯ ಯಾವುದೇ ಭಾಗದಲ್ಲಿ ಬರೆದರೆ, ನೀವು ಅನರ್ಹತೆಗೆ ಬಾಧ್ಯರಾಗುತ್ತೀರಿ.
- ಪರೀಕ್ಷೆಯು ಮುಗಿದನಂತರ, ಕಡ್ಡಾಯವಾಗಿ OMR ಉತ್ತರ ಹಾಳೆಯನ್ನು ಸಂವಿಧಾನದಿಂದ ನೀವು ಹಿಂತಿರುಗಿಸಬೇಕು ಮತ್ತು ಪರೀಕ್ಷಾ ಕೊಠಡಿಯ ಹೊರಗೆ OMRನ್ನು ನಿಮ್ಮೊಂದಿಗೆ ಕೊಂಡೊಯ್ಯಕೂಡದು.
- ಪರೀಕ್ಷೆಯ ನಂತರ, ಪರೀಕ್ಷಾ ಪ್ರಶ್ನೆಪತ್ರಿಕೆಯನ್ನು ಮತ್ತು ನಕಲು OMR ಉತ್ತರ ಹಾಳೆಯನ್ನು ನಿಮ್ಮೊಂದಿಗೆ ತೆಗೆದುಕೊಂಡು ಹೋಗಬಹುದು.
- ನೀಲಿ/ಕಪ್ಪು ಬಾಲ್ ಪಾಯಿಂಟ್ ಪೆನ್ ಮಾತ್ರವೇ ಉಪಯೋಗಿಸಿರಿ.
- ಕ್ಯಾಲ್ಕುಲೇಟರ್, ವಿದ್ಯುನ್ಮಾನ ಉಪಕರಣ ಅಥವಾ ಲಾಗ್ ಟೇಬಲ್ ಇತ್ಯಾದಿಯ ಉಪಯೋಗವನ್ನು ನಿಷೇಧಿಸಲಾಗಿದೆ.
- ಸರಿ ಅಲ್ಲದ ಉತ್ತರಗಳಿಗೆ ಋಣ ಅಂಕ ಇರುವುದಿಲ್ಲ.
- ಕನ್ನಡ ಮತ್ತು ಇಂಗ್ಲೀಷ್ ಆವೃತ್ತಿಗಳ ಪ್ರಶ್ನೆಪತ್ರಿಕೆಗಳಲ್ಲಿ ಯಾವುದೇ ರೀತಿಯ ವ್ಯತ್ಯಾಸಗಳು ಕಂಡುಬಂದಲ್ಲಿ, ಇಂಗ್ಲೀಷ್ ಆವೃತ್ತಿಗಳಲ್ಲಿರುವುದೇ ಅಂತಿಮವೆಂದು ಪರಿಗಣಿಸಬೇಕು.

**Instructions for the Candidates**

- Write your roll number in the space provided on the top of this page.
- This paper consists of Hundred multiple-choice type of questions.
- At the commencement of examination, the question booklet will be given to you. In the first 5 minutes, you are requested to open the booklet and compulsorily examine it as below :
  - To have access to the Question Booklet, tear off the paper seal on the edge of the cover page. Do not accept a booklet without sticker seal or open booklet.
  - Tally the number of pages and number of questions in the booklet with the information printed on the cover page. Faulty booklets due to pages/questions missing or duplicate or not in serial order or any other discrepancy should be got replaced immediately by a correct booklet from the invigilator within the period of 5 minutes. Afterwards, neither the Question Booklet will be replaced nor any extra time will be given.
- Each item has four alternative responses marked (A), (B), (C) and (D). You have to darken the circle as indicated below on the correct response against each item.

Example :  (A)  (B)  (C)  (D)

where (C) is the correct response.
- Your responses to the questions are to be indicated in the OMR Sheet kept inside this Booklet. If you mark at any place other than in the circles in the OMR Sheet, it will not be evaluated.
- Read the instructions given in OMR carefully.
- Rough Work is to be done in the end of this booklet.
- If you write your name or put any mark on any part of the OMR Answer Sheet, except for the space allotted for the relevant entries, which may disclose your identity, you will render yourself liable to disqualification.
- You have to return the test OMR Answer Sheet to the invigilators at the end of the examination compulsorily and must NOT carry it with you outside the Examination Hall.
- You can take away question booklet and carbon copy of OMR Answer Sheet after the examination.
- Use only Blue/Black Ball point pen.
- Use of any calculator, electronic gadgets or log table etc., is prohibited.
- There is no negative marks for incorrect answers.
- In case of any discrepancy found in the Kannada translation of a question booklet the question in English version shall be taken as final.

**EARTH SCIENCES**  
**Paper – II**

**Note :** This paper contains **hundred (100)** objective type questions. **Each** question carries **two (2)** marks. **All** questions are **compulsory**.

1. Tidal flat indicate \_\_\_\_\_ environment.

- (A) Shoreline
- (B) Deep sea
- (C) Glacial
- (D) Lacustrine

2. Match the following and select the correct option from the following :

**List – I****List – II**

- |                       |                           |
|-----------------------|---------------------------|
| a. Up welling         | 1. Nutrient deficit       |
| b. Down welling       | 2. Parallel to shore      |
| c. Rip currents       | 3. Potential fishing zone |
| d. Longshore currents | 4. Perpendicular to shore |

**Codes :**

<b>a</b>	<b>b</b>	<b>c</b>	<b>d</b>
----------	----------	----------	----------

- |         |     |     |     |
|---------|-----|-----|-----|
| (A) (3) | (1) | (4) | (2) |
| (B) (3) | (4) | (1) | (2) |
| (C) (1) | (3) | (2) | (4) |
| (D) (2) | (4) | (1) | (3) |

3. Rate of sedimentation on the inner shelf of Arabian sea is

- (A) > 1 mm/year
- (B) < 1 mm/year
- (C) 3 – 5 mm/year
- (D) 7.5 mm/year

4. Match the following :

**List – I****List – II**

- |  |                            |
|--|----------------------------|
| a. Warm ocean current                    | 1. Ash from volcanoes      |
| b. Major source of oceanic salinity      | 2. East Australian current |
| c. Average salinity of Arabian sea water | 3. Atlantic ocean          |
| d. The challenge rise is located at      | 4. 35 ppt                  |

**Codes :**

<b>a</b>	<b>b</b>	<b>c</b>	<b>d</b>
----------	----------	----------	----------

- |         |     |     |     |
|---------|-----|-----|-----|
| (A) (2) | (1) | (4) | (3) |
| (B) (1) | (4) | (3) | (2) |
| (C) (2) | (3) | (4) | (1) |
| (D) (3) | (2) | (1) | (4) |

5. Arrange the following volcanic events in chronological order (older to younger).

- (i) Rajmahal volcanism
  - (ii) Deccan volcanism
  - (iii) Panjal volcanism
  - (iv) Malani volcanism
- |                       |
|-----------------------|
| (A) iv – iii – i – ii |
| (B) ii – iv – iii – i |
| (C) iii – ii – i – iv |
| (D) i – ii – iii – iv |



6. The Himalaya mountains represent \_\_\_\_\_ type of plate margin.
- (A) Convergent
  - (B) Divergent
  - (C) Transverse
  - (D) Transcurrent
7. Which of the following method of electrical prospecting is most suited in the exploration of disseminated sulphide deposits ?
- (A) Electrical resistivity method
  - (B) Potential drop ratio method
  - (C) Induced polarisation method
  - (D) Equipotential method
8. Unit in which resistivity is represented ?
- (A) Ohm/m
  - (B) Ohm/m<sup>2</sup>
  - (C) Ohm – m
  - (D) Ohm – m<sup>2</sup>
9. In resistivity profiling method
- (A) Place of measurement remains constant while the current electrode separation changes
  - (B) Place of measurement changes while the current electrode separation remains constant
  - (C) Both place of measurement and current electrode separation change
  - (D) Profiling method is never used in resistivity prospecting
10. Which one of the following methods makes use of “eddy currents” ?
- (A) Resistivity method
  - (B) Electromagnetic methods
  - (C) Gravity methods
  - (D) Self potential method
11. Which one of the following is a paramagnetic mineral ?
- (A) Pyrrhotite
  - (B) Graphite
  - (C) Calcite
  - (D) Anhydrite
12. Which of the following corrections is not applied to the field magnetic data ?
- (A) Temperature correction
  - (B) Free air correction
  - (C) Diurnal correction
  - (D) Normal correction
13. Concentration of ozone is maximum in
- (A) Troposphere
  - (B) Mesosphere
  - (C) Thermosphere
  - (D) Stratosphere



14. Climate tends to be moderate in the
- (A) Northern hemisphere
  - (B) Southern hemisphere
  - (C) Equal in both Northern and Southern hemispheres
  - (D) Equatorial region
15. El Nino Southern Oscillation (ENSO) is an
- (A) Oceanic process
  - (B) Atmospheric process
  - (C) Oceanic-atmospheric-land process
  - (D) Oceanic-atmospheric process
16. Which of the following clouds is most likely to produce hail ?
- (A) Cirrocumulus
  - (B) Cumulonimbus
  - (C) Stratocumulus
  - (D) Altostratus
17. \_\_\_\_\_ has been identified as the favorable location in India to harness tidal energy.
- (A) Gulf of Kutch
  - (B) Vishakhapatnam
  - (C) Cochin
  - (D) Chennai
18. Temperature falls steadily with increase in altitude at a rate of  $6.4^{\circ}\text{C}/\text{km}$  in the troposphere is known as
- (A) Normal temperature gradient
  - (B) Normal temperature lapse rate
  - (C) Fall in temperature
  - (D) Normal environmental lapse rate
19. Which of the following mineral assemblages belong to Bowen's discontinuous reaction series ?
- (A) Amphibole – Olivine – Pyroxene – Biotite
  - (B) Olivine – Pyroxene – Amphibole – Biotite
  - (C) Olivine – Amphibole – Biotite – Pyroxene
  - (D) Olivine – Biotite – Pyroxene – Amphibole
20. If magma crystallizes at a temperature of about  $1500^{\circ}\text{C}$ , it's likely composition will be
- (A) Mafic
  - (B) Felsic
  - (C) Mixture of mafic and felsic
  - (D) More felsic, less mafic
21. Indo-Gangetic basin corresponds to
- (A) Back arc basin
  - (B) Foreland basin
  - (C) Dorsal basin
  - (D) Erosional basin



22. Match the following :

**List – I**

- a. Era
- b. Period
- c. Epoch
- d. Age

**List – II**

- 1. System
- 2. Group
- 3. Stage
- 4. Series

**Codes :**

- |     | <b>a</b> | <b>b</b> | <b>c</b> | <b>d</b> |
|-----|----------|----------|----------|----------|
| (A) | (2)      | (1)      | (4)      | (3)      |
| (B) | (1)      | (2)      | (3)      | (4)      |
| (C) | (4)      | (3)      | (2)      | (1)      |
| (D) | (1)      | (4)      | (3)      | (2)      |

23. Match the following :

**List – I**

- a. Laccolith
- b. Lopolith
- c. Bysmalith
- d. Phacolith

**List – II**

- 1. Saucer shaped intrusive body
- 2. Crescent shaped igneous body
- 3. Convex top and flat bottom
- 4. Broken intrusive body

**Codes :**

- |     | <b>a</b> | <b>b</b> | <b>c</b> | <b>d</b> |
|-----|----------|----------|----------|----------|
| (A) | (3)      | (1)      | (4)      | (2)      |
| (B) | (1)      | (2)      | (3)      | (4)      |
| (C) | (4)      | (3)      | (2)      | (1)      |
| (D) | (1)      | (4)      | (3)      | (2)      |

24. Which of the following is the reservoir rock for petroleum ?

- (A) Sandstone
- (B) Shale
- (C) Dunite
- (D) Granite

25. Sulfide droplets are separated from residual magma by

- (A) Liquid immiscibility
- (B) Fractional crystallization
- (C) Gaseous transfer
- (D) Filter pressing

26. Ankaleswar oil field represents

- (A) Syncline
- (B) Dome
- (C) Gravity fault
- (D) Anticline

27. Infillings of vesicles in lavas by secondary minerals are known as

- (A) Pumice
- (B) Scoria
- (C) Amygdules
- (D) Slag



28. Instrument used to measure the height of a tower in an aerial photograph is known as
- (A) Measuring tape
  - (B) Parallax bar
  - (C) Stereoscope
  - (D) Mirror stereoscope
29. Satellites that view the same portion of the earth's surface at all times have
- (A) Near polar orbits
  - (B) Geostationary orbits
  - (C) Sun-synchronous orbits
  - (D) Local sun time orbit
30. Building stones of good quality contain \_\_\_\_\_ soluble salts.
- (A) 0%
  - (B) 2%
  - (C) 4%
  - (D) 6%
31. Thiessen polygon method involves
- (A) Measuring distance between contours
  - (B) Measuring areas between contours
  - (C) Drawing perpendicular to the line joining stations
  - (D) Drawing perpendicular to the line drawn between contours
32. \_\_\_\_\_ in Karnataka is known as "Cherrapunji of South India".
- (A) Kolar
  - (B) Mangalore
  - (C) Agumbe
  - (D) Gadag
33. The appropriate method that gives information on the presence or absence of water in groundwater exploration is
- (A) Seismic method
  - (B) Self potential method
  - (C) Resistivity method
  - (D) Gravity method
34. When surface water in the ocean evaporates, the effect on Sea Surface Temperature (SST) and Sea Surface Salinity (SSS) is
- (A) SST and SSS decrease together
  - (B) SST and SSS increase together
  - (C) SST decreases and SSS increases
  - (D) SST increases and SSS decreases
35. Extreme anoxic condition in sea floor sediment is indicated by
- (A) Nitrate reduction
  - (B) Sulfate reduction
  - (C) Mn-oxide reduction
  - (D) Fe-oxide reduction



36. Humidity is measured using
- (A) Rain gauges
  - (B) Barometer
  - (C) Psychrometer
  - (D) Anemometers
37. Lowermost layer of the atmosphere is characterized by decrease in temperature with height, is known as
- (A) Troposphere
  - (B) Stratosphere
  - (C) Thermosphere
  - (D) Stratopause
38. The silica mineral formed due to impact of meteorite is
- (A)  $\alpha$  – quartz
  - (B) Stishovite
  - (C) Cristobalite
  - (D) Tridymite
39. Standard used to determine  $\delta C^{13}$  in sample is
- (A) Peedee Belemnite
  - (B) SMOW
  - (C) GSP – 1
  - (D) BCR – 1
40. The most suitable mineral for Rb-Sr dating is
- (A) Quartz
  - (B) Mica
  - (C) Olivine
  - (D) Carbonate
41. Element Europium is
- (A) Enriched in lower crust
  - (B) Depleted in upper crust
  - (C) Enriched in upper crust
  - (D) Depleted in lower crust
42. Windmanstatten structure are observed in
- (A) Charnockites
  - (B) Meteorites
  - (C) Pseudotachylites
  - (D) Comets
43. Disconformity is
- (A) A rock unit that does not contain fossils
  - (B) An erosional surface between igneous and metamorphic rocks
  - (C) An erosional surface between horizontal sedimentary rocks
  - (D) An erosional surface between igneous and sedimentary rocks



44. Radiometric dating is least useful \_\_\_\_\_ rocks.  
(A) Granitic (B) Basaltic  
(C) Metamorphic (D) Sedimentary
45. Soils in which humus, sand and clay are in more or less equal proportions is  
(A) Loamy soils  
(B) Regur  
(C) Chernozem  
(D) Pedalfer
46. The amount of visible radiation reflected by the earth is  
(A) Scattering  
(B) Albedo  
(C) Dispersion  
(D) Refraction
47. Streams which flow opposite to the original consequent streams are  
(A) Subsequent  
(B) Insequent  
(C) Obsequent  
(D) Resequent
48. Slaty cleavage is best developed in rocks with  
(A) Micaceous minerals  
(B) Chloritic minerals  
(C) Arenaceous minerals  
(D) Ferruginous minerals
49. Repetition of beds are due to  
(A) Faulting  
(B) Folding  
(C) Unconformity  
(D) Disconformity
50. Nappe structures result due to  
(A) Overthrusting  
(B) Recumbent folding  
(C) Normal faulting  
(D) Both A) and B)
51. Eparchean uniformity separates  
(A) Early Archaean and late Archaean  
(B) Archaean and Proterozoic  
(C) Archaean and Phanerozoic  
(D) Proterozoic and Paleozoic
52. The present epoch in earth's age is  
(A) Holocene  
(B) Pleistocene  
(C) Pliocene  
(D) Miocene
53. The layer that produces the earth's magnetic field  
(A) Crust  
(B) Inner core  
(C) Mantle  
(D) Outer core





54. The erosional surface that separates two sets of sedimentary layers with non-parallel bedding planes.
- (A) Cross bedding
  - (B) Formation
  - (C) Fault unconformity
  - (D) Angular unconformity
55. The concept of Isostasy is related to
- (A) Equal temperature
  - (B) Equal pressure
  - (C) Equal balance
  - (D) Equal precipitation
56. The moon is no longer geologically active because
- (A) It rotates too slowly
  - (B) It is so small that it cooled quickly
  - (C) It does not have surface oceans
  - (D) It never had enough radioactive elements
57. The ratio between the number of streams of any given order to the number of streams of the next lower order is known as
- (A) Stream frequency
  - (B) Drainage density
  - (C) Bifurcation ratio
  - (D) Both A) and B)
58. An irregular suture like boundary developed in some limestones, along which non-carbonate impurities may collect, formed by pressure solution process is called
- (A) Stylolite
  - (B) Inversion
  - (C) Overgrowth
  - (D) Septaria
59. A layer less than one cm, in thickness is
- (A) Bedding plane
  - (B) Laminae
  - (C) Thickly bedded
  - (D) Current bedding
60. \_\_\_\_\_ belongs to Brachiopod.
- (A) Terebratulla
  - (B) Paradoxides
  - (C) Globigerina
  - (D) Nautilus
61. Corals are exclusively
- (A) Marine-benthic
  - (B) Brackish and benthic
  - (C) Marine and pelagic
  - (D) Fresh water and neritic



62. Which of the following is known as the “age of mammals” ?

- (A) Cenozoic
- (B) Palaeozoic
- (C) Mesozoic
- (D) Precambrian

63. Entropy of a system increases with

- (A) Solid → liquid → gas
- (B) Liquid → solid → gas
- (C) Gas → solid → liquid
- (D) Gas → liquid → solid

64. In a binary system T-X diagram end member crystallises together at

- (A) Low temperature
- (B) High temperature
- (C) Eutectic temperature
- (D) Peritectic temperature

65. Red soil is characteristic of \_\_\_\_\_ terrain.

- (A) Basaltic
- (B) Granitic
- (C) Limestone
- (D) Shale

66. Match the following and select the correct option :

**List – I**

**List – II**

- |                     |                   |
|---------------------|-------------------|
| a. Full moon time   | 1. Atlantic ocean |
| b. First quarter    | 2. Pacific ocean  |
| c. Mariana trench   | 3. Neap tide      |
| d. Labrador current | 4. Spring tide    |

**Codes :**

- |     | <b>a</b> | <b>b</b> | <b>c</b> | <b>d</b> |
|-----|----------|----------|----------|----------|
| (A) | (4)      | (3)      | (1)      | (2)      |
| (B) | (3)      | (4)      | (1)      | (2)      |
| (C) | (4)      | (3)      | (2)      | (1)      |
| (D) | (2)      | (3)      | (4)      | (1)      |

67. The last 50000 years of geologic time is estimated by \_\_\_\_\_ dating.

- (A) Pb – Pb
- (B) U – Pb
- (C) C<sup>12</sup>
- (D) C<sup>14</sup>

68. The following is enriched in the groundwater by biochemical pollution.

- (A) Potash
- (B) Sulphur
- (C) Chlorides
- (D) Nitrates



69. Majority of earthquakes occur at or near

- (A) Plate boundaries
- (B) Cratons
- (C) Mountain belts
- (D) Continental shelf

70. Miogeosyncline develops along

- (A) Passive margin
- (B) Active margin
- (C) Craton border
- (D) Volcanic belts

71. The plastic layer of the mantle is

- (A) Lithosphere
- (B) Asthenosphere
- (C) Barysphere
- (D) Hydrosphere

72. What would be the extreme effect of a reduced ozone layer by CFC ?

- (A) Extinction of life
- (B) Evolution of life
- (C) Up welling in the ocean
- (D) Reduction of nutrients

73. Lunar crater of meteoritic origin is located in \_\_\_\_\_ State.

- (A) Madhya Pradesh
- (B) Orissa
- (C) Maharashtra
- (D) West Bengal

74. Match the following :

**List – I**

**List – II**

- |            |                 |
|------------|-----------------|
| a. Fluvial | 1. Moraines     |
| b. Marine  | 2. Imbricate    |
| c. Wind    | 3. Ripple marks |
| d. Glacial | 4. Loess        |

**Codes :**

- |     | <b>a</b> | <b>b</b> | <b>c</b> | <b>d</b> |
|-----|----------|----------|----------|----------|
| (A) | (2)      | (1)      | (4)      | (3)      |
| (B) | (1)      | (2)      | (4)      | (3)      |
| (C) | (2)      | (3)      | (4)      | (1)      |
| (D) | (4)      | (2)      | (3)      | (1)      |

75. \_\_\_\_\_ blooms are called as blue green algae.

- (A) Diatoms
- (B) Cyanobacteria
- (C) Dinoflagellate
- (D) Coccolithophores



76. Match the following satellites and their sensors :

**List – I**

**List – II**

- |             |                     |
|-------------|---------------------|
| a. Oceansat | 1. AVHRR            |
| b. NOAA     | 2. CZCS             |
| c. Nimbus   | 3. OCM              |
| d. Landsat  | 4. ETM <sup>+</sup> |

**Codes :**

- |     | <b>a</b> | <b>b</b> | <b>c</b> | <b>d</b> |
|-----|----------|----------|----------|----------|
| (A) | (3)      | (1)      | (4)      | (2)      |
| (B) | (3)      | (1)      | (2)      | (4)      |
| (C) | (1)      | (3)      | (2)      | (4)      |
| (D) | (2)      | (4)      | (1)      | (3)      |

77. In sea water, temperature gradually decreases with depth beyond 1000 m, whereas salinity increases from 1000 m to \_\_\_\_\_ and then gradually decreases with depth.

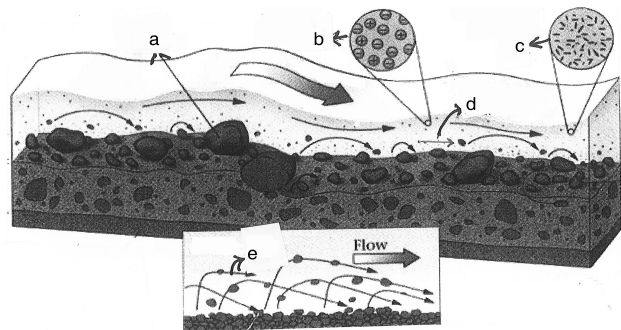
- (A) 1500 m
- (B) 2000 m
- (C) 2500 m
- (D) 3000 m

78. The oldest rocks in the Dharwar craton are

- (A) Chitradurga group of rocks
- (B) Sargur supra crustals
- (C) Closepet granite
- (D) Bababudan group

79. Identify the types of sediment transport (marked as a, b, c, d and e in the given figure) mechanism from the list given below :

- 1. Solution load
- 2. Saltation
- 3. Traction
- 4. Rolling grain
- 5. Suspended load

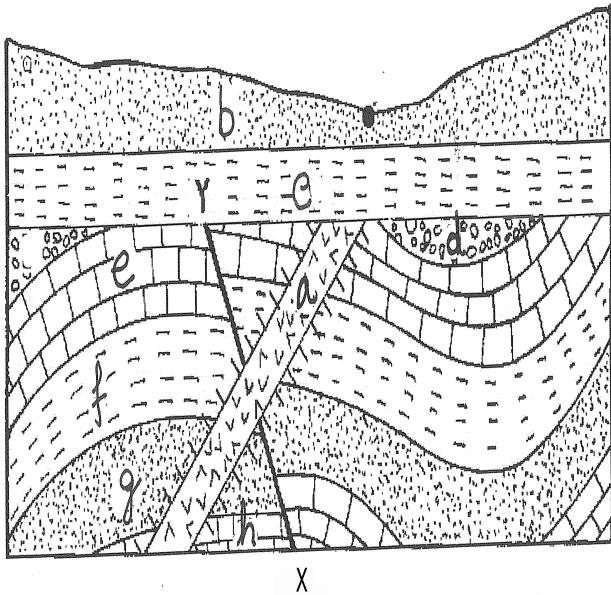


**Codes :**

- |     | <b>a</b> | <b>b</b> | <b>c</b> | <b>d</b> | <b>e</b> |
|-----|----------|----------|----------|----------|----------|
| (A) | (4)      | (1)      | (5)      | (3)      | (2)      |
| (B) | (1)      | (4)      | (3)      | (5)      | (2)      |
| (C) | (2)      | (4)      | (1)      | (3)      | (5)      |
| (D) | (4)      | (1)      | (2)      | (3)      | (5)      |



80.



Arrange the geological events (a to h and X– Y) in chronological order (Older to younger).

- (A) b, c, a, d, e, f, g, h, X–Y
- (B) h, g, f, e, d, X–Y, a, c, b
- (C) b, c, X–Y, a, d, e, f, g, h
- (D) a, X–Y, b, c, d, e, f, g, h

81. Match the following :

List – I	List – II
Locations	Mineral deposit
a. Zawar	1. Phosphate
b. Ingaldhal	2. Bauxite
c. Hutti	3. Pb – Zn
d. Jhamarkotra	4. Copper
e. East coast	5. Gold

Codes :

	a	b	c	d	e
(A)	(3)	(4)	(5)	(1)	(2)
(B)	(5)	(1)	(4)	(2)	(3)
(C)	(2)	(3)	(5)	(1)	(4)
(D)	(4)	(5)	(1)	(3)	(2)

82. Deccan traps are the outcome of \_\_\_\_\_ type of volcanism.

- (A) Fissure
- (B) Craton
- (C) Pillow
- (D) Bulbous

83. Expansion fissures and pleochroic haloes are characteristic feature of mineral

- (A) Olivine
- (B) Garnet
- (C) Cordierite
- (D) Enstatite

84. Quartz and tridymite are examples of

- (A) Isomorphism
- (B) Solid solution
- (C) Polymorphism
- (D) Dimorphism

85. Dravites are

- (A) Mg-rich tourmaline
- (B) Ca-rich tourmaline
- (C) Mg-rich olivine
- (D) Ca-rich olivine

86. The rock formed in upper mantle is

- (A) Granodiorite
- (B) Granulite
- (C) Peridotite
- (D) Syenite



87. Point bar deposit is associated with

- (A) Braided river
- (B) Estuary
- (C) Meandering river
- (D) Beach

88. Which of the following Geomorphic features is not an indicator of active tectonics ?

- (A) River terraces
- (B) Stream piracy
- (C) U-shaped valley
- (D) Incised valley

89. Match the following :

<b>List – I</b>	<b>List – II</b>
<b>Satellite/ Sensors</b>	<b>Spatial Resolution</b>
a. IRS – 1A – LISS I	1. 36.25 m
b. IRS – 1B – LISS II	2. 72.50 m
c. IRS – 1C – LISS III	3. 5.8 m
d. IRS – 1D – Panchromatic	4. 23.5 m

**Codes :**

<b>a</b>	<b>b</b>	<b>c</b>	<b>d</b>
(A) (3)	(4)	(2)	(1)
(B) (4)	(3)	(1)	(2)
(C) (2)	(1)	(4)	(3)
(D) (1)	(2)	(3)	(4)

90. In digital photogrammetry, unknown parameters of the camera can be derived by a mathematical equation called

- (A) Colinearity
- (B) Algebraic
- (C) Arithmetic
- (D) Linearity

91. A thick rapidly accumulating sediment formed within a long, narrow, subsiding belt of the sea, generally parallel to a plate margin is called

- (A) Geosyncline
- (B) Orogenic belt
- (C) Gulf
- (D) Sea shelf

92. Match the following and select the correct option :

<b>List – I</b>	<b>List – II</b>
a. Salinity	1. Secchi disk
b. Wind speed	2. Echo sounder
c. Bathymetry	3. Anemometer
d. Photic zone	4. Refractometer

**Codes :**

<b>a</b>	<b>b</b>	<b>c</b>	<b>d</b>
(A) (1)	(2)	(3)	(4)
(B) (3)	(2)	(1)	(4)
(C) (2)	(3)	(4)	(1)
(D) (4)	(3)	(2)	(1)



93. The isolated residual hills present as erosional remnants in plains are referred to as

- (A) Hog back
- (B) Mesa
- (C) Monadnock
- (D) Butte

94. Well sorted and well rounded sand grains lead to

- (A) Highest permeability
- (B) Highest porosity
- (C) No permeability
- (D) No porosity

95. The concept of lighter crust floating on a denser underlying mantle is

- (A) Continental drift
- (B) Isostasy
- (C) Orogey
- (D) Mobile belt

96. Trellis drainage pattern is characteristic of \_\_\_\_\_ structure.

- (A) Domal                      (B) Fault
- (C) Fold                        (D) Joint

97. Weathering of potash feldspar give rise to

- (A) Limonite                  (B) Kaolinite
- (C) Calcite                    (D) Chlorite

98. Match the following :

**List – I  
(Rock)**

**List – II  
(Texture)**

- |                      |                   |
|----------------------|-------------------|
| a. Dunite            | 1. Hypidiomorphic |
| b. Granite           | 2. Ophitic        |
| c. Dolerite          | 3. Aphanitic      |
| d. Apatite           | 4. Mylonite       |
| e. Sheared<br>Gneiss | 5. Cumulus        |

**Codes :**

- |     | <b>a</b> | <b>b</b> | <b>c</b> | <b>d</b> | <b>e</b> |
|-----|----------|----------|----------|----------|----------|
| (A) | (2)      | (5)      | (1)      | (4)      | (3)      |
| (B) | (5)      | (1)      | (2)      | (3)      | (4)      |
| (C) | (4)      | (3)      | (1)      | (5)      | (2)      |
| (D) | (3)      | (4)      | (5)      | (2)      | (1)      |

99. In the energy budget of the earth-atmosphere system, the largest component is

- (A) Absorption of terrestrial radiation by the atmosphere
- (B) Absorption of solar radiation by the atmosphere
- (C) Outgoing radiation to space
- (D) Latent heat

100. The dense mass of water on smoke or dust particles in the lower atmospheric layers constitute

- (A) Fog                              (B) Frost
- (C) Blizzard                        (D) Mist



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Space for Rough Work