

Test Paper : II

Test Subject : EARTH SCIENCE

Test Subject Code : K-3217

Test Booklet Serial No. : \_\_\_\_\_

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

Roll No. 

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(Figures as per admission card)

**Name & Signature of Invigilator/s**

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

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

Paper : II

Subject : EARTH SCIENCE

Time : 1 Hour 15 Minutes

Maximum Marks : 100

Number of Pages in this Booklet : 8

Number of Questions in this Booklet : 50

**ಅಭ್ಯರ್ಥಿಗಳಿಗೆ ಸೂಚನೆಗಳು**

1. ಈ ಪುಟದ ಮೇಲ್ಭಾಗದಲ್ಲಿ ಒದಗಿಸಿದ ಸ್ಥಳದಲ್ಲಿ ನಿಮ್ಮ ರೋಲ್ ನಂಬರನ್ನು ಬರೆಯಿರಿ.
2. ಈ ಪತ್ರಿಕೆಯು ಬಹು ಆಯ್ಕೆ ವಿಧದ ಐವತ್ತು ಪ್ರಶ್ನೆಗಳನ್ನು ಒಳಗೊಂಡಿದೆ.
3. ಪರೀಕ್ಷೆಯ ಪ್ರಾರಂಭದಲ್ಲಿ ಪ್ರಶ್ನೆಪುಸ್ತಕವನ್ನು ನಿಮಗನಿರಿಸಲಾಗುವುದು. ಮೊದಲ 5 ನಿಮಿಷಗಳಲ್ಲಿ ನೀವು ಪುಸ್ತಕವನ್ನು ತೆರೆಯಲು ಮತ್ತು ಕೆಳಗಿನಂತೆ ಕಡ್ಡಾಯವಾಗಿ ಪರಿಶೀಲಿಸಲು ಕೋರಲಾಗಿದೆ.  
(i) ಪ್ರಶ್ನೆ ಪುಸ್ತಕಕ್ಕೆ ಪ್ರವೇಶಾಪಕಾರ ಪಡೆಯಲು, ಈ ಹೊದಿಕೆ ಪುಟದ ಅಂಚಿನ ಮೇಲಿರುವ ಪೇಪರ್ ಸೀಲನ್ನು ಹರಿಯಿರಿ. ಸ್ವಿಚ್ ಸೀಲ್ ಇಲ್ಲದ ಅಥವಾ ತೆರದ ಪುಸ್ತಕವನ್ನು ಸ್ವೀಕರಿಸಬೇಡಿ.  
(ii) ಪುಸ್ತಕಿಯಲ್ಲಿನ ಪ್ರಶ್ನೆಗಳ ಸಂಖ್ಯೆ ಮತ್ತು ಪುಟಗಳ ಸಂಖ್ಯೆಯನ್ನು ಮುಖಪುಟದ ಮೇಲೆ ಮುದ್ರಿಸಿದ ಮಾಹಿತಿಯೊಂದಿಗೆ ತಾಳೆ ನೋಡಿರಿ. ಪುಟಗಳು/ಪ್ರಶ್ನೆಗಳು ಕಾಣೆಯಾದ, ಅಥವಾ ದ್ವಿಪ್ರತಿ ಅಥವಾ ಅನುಕ್ರಮವಾಗಿಲ್ಲದ ಅಥವಾ ಇತರ ಯಾವುದೇ ವ್ಯತ್ಯಾಸದ ದೋಷಪೂರಿತ ಪುಸ್ತಕಿಯನ್ನು ಕೂಡಲೆ 5 ನಿಮಿಷದ ಅವಧಿ ಒಳಗೆ, ಸಂವೀಕ್ಷಕರಿಂದ ಸರಿ ಇರುವ ಪುಸ್ತಕಿಗೆ ಬದಲಾಯಿಸಿಕೊಳ್ಳಬೇಕು. ಆ ಬಳಿಕ ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯನ್ನು ಬದಲಾಯಿಸಲಾಗುವುದಿಲ್ಲ. ಯಾವುದೇ ಹೆಚ್ಚು ಸಮಯವನ್ನೂ ಕೊಡಲಾಗುವುದಿಲ್ಲ.
4. ಪ್ರತಿಯೊಂದು ಪ್ರಶ್ನೆಗೂ (A), (B), (C) ಮತ್ತು (D) ಎಂದು ಗುರುತಿಸಿದ ನಾಲ್ಕು ಪರ್ಯಾಯ ಉತ್ತರಗಳಿವೆ. ನೀವು ಪ್ರಶ್ನೆಯ ಎದುರು ಸರಿಯಾದ ಉತ್ತರದ ಮೇಲೆ, ಕೆಳಗೆ ಕಾಣಿಸಿದಂತೆ ಅಂಡಾಕೃತಿಯನ್ನು ಕವಚಿಸಬೇಕು.  
ಉದಾಹರಣೆ: 

A	B	●	D
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(C) ಸರಿಯಾದ ಉತ್ತರವಾಗಿದ್ದಾಗ.
5. ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆ I ರಲ್ಲಿ ಕೊಟ್ಟಿರುವ OMR ಉತ್ತರ ಹಾಳೆಯಲ್ಲಿ, ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆ I ಮತ್ತು ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆ II ರಲ್ಲಿ ಇರುವ ಪ್ರಶ್ನೆಗಳಿಗೆ ನಿಮ್ಮ ಉತ್ತರಗಳನ್ನು ಸೂಚಿಸತಕ್ಕದ್ದು OMR ಹಾಳೆಯಲ್ಲಿ ಅಂಡಾಕೃತಿಯಲ್ಲದೆ ಬೇರೆ ಯಾವುದೇ ಸ್ಥಳದಲ್ಲಿ ಉತ್ತರವನ್ನು ಗುರುತಿಸಿದರೆ, ಅದರ ಮೌಲ್ಯಮಾಪನ ಮಾಡಲಾಗುವುದಿಲ್ಲ.
6. OMR ಉತ್ತರ ಹಾಳೆಯಲ್ಲಿ ಕೊಟ್ಟ ಸೂಚನೆಗಳನ್ನು ಜಾಗರೂಕತೆಯಿಂದ ಓದಿರಿ.
7. ಎಲ್ಲಾ ಕರಡು ಕೆಲಸವನ್ನು ಪುಸ್ತಕಿಯ ಕೊನೆಯಲ್ಲಿ ಮಾಡತಕ್ಕದ್ದು.
8. ನಿಮ್ಮ ಗುರುತನ್ನು ಬಹಿರಂಗಪಡಿಸಬಹುದಾದ ನಿಮ್ಮ ಹೆಸರು ಅಥವಾ ಯಾವುದೇ ಚಿಹ್ನೆಯನ್ನು ಸಂಗತವಾದ ಸ್ಥಳ ಹೊರತು ಪಡಿಸಿ, OMR ಉತ್ತರ ಹಾಳೆಯ ಯಾವುದೇ ಭಾಗದಲ್ಲಿ ಬರೆದರೆ, ನೀವು ಅನರ್ಪಣೆಗೆ ಬಾಧ್ಯರಾಗಿರುತ್ತೀರಿ.
9. ಪರೀಕ್ಷೆಯು ಮುಗಿದನಂತರ, ಕಡ್ಡಾಯವಾಗಿ OMR ಉತ್ತರ ಹಾಳೆಯನ್ನು ಸಂವೀಕ್ಷಕರಿಗೆ ನೀವು ಹಿಂತಿರುಗಿಸಬೇಕು ಮತ್ತು ಪರಿಶೀಲಿಸಲು ಕೊಡಲು OMR ನ್ನು ನಿಮ್ಮೊಂದಿಗೆ ಕೊಂಡೊಯ್ಯಕೂಡದು.
10. ಪರೀಕ್ಷೆಯ ನಂತರ, ಪರಿಶೀಲಿಸಿ ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯನ್ನು ಮತ್ತು ನಕಲು OMR ಉತ್ತರ ಹಾಳೆಯನ್ನು ನಿಮ್ಮೊಂದಿಗೆ ತೆಗೆದುಕೊಂಡು ಹೋಗಬಹುದು.
11. ನೀಲಿ/ಕಪ್ಪು ಬಾಲ್ ಪಾಯಿಂಟ್ ಪೆನ್ ಮಾತ್ರವೇ ಉಪಯೋಗಿಸಿರಿ.
12. ಕ್ಯಾಲ್ಕುಲೇಟರ್, ಎಡ್ಜ್ ಗ್ರಾಫ್ ಉಪಕರಣ ಅಥವಾ ಲಾಗ್ ಟೇಬಲ್ ಇತ್ಯಾದಿಯು ಉಪಯೋಗವನ್ನು ನಿಷೇಧಿಸಲಾಗಿದೆ.
13. ಸರಿ ಅಲ್ಲದ ಉತ್ತರಗಳಿಗೆ ಋಣ ಅಂಕ ಇರುವುದಿಲ್ಲ.
14. ಕನ್ನಡ ಮತ್ತು ಇಂಗ್ಲೀಷ್ ಆವೃತ್ತಿಗಳ ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಗಳಲ್ಲಿ ಯಾವುದೇ ರೀತಿಯ ವ್ಯತ್ಯಾಸಗಳ ಕಂಡುಬಂದಲ್ಲಿ, ಇಂಗ್ಲೀಷ್ ಆವೃತ್ತಿಗಳಲ್ಲಿರುವುದೇ ಅಂತಿಮವೆಂದು ಪರಿಗಣಿಸಬೇಕು.

**Instructions for the Candidates**

1. Write your roll number in the space provided on the top of this page.
2. This paper consists of fifty multiple-choice type of questions.
3. 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 :  
(i) 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.  
(ii) 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.
4. 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	●	D
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where (C) is the correct response.
5. Your responses to the questions are to be indicated in the OMR Sheet kept inside the Paper I Booklet only. If you mark at any place other than in the circles in the OMR Sheet, it will not be evaluated.
6. Read the instructions given in OMR carefully.
7. Rough Work is to be done in the end of this booklet.
8. 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.
9. 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.
10. You can take away question booklet and carbon copy of OMR Answer Sheet after the examination.
11. Use only Blue/Black Ball point pen.
12. Use of any calculator, Electronic gadgets or log table etc., is prohibited.
13. There is no negative marks for incorrect answers.
14. 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 SCIENCE**  
**Paper – II**

**Note :** This paper contains **fifty (50)** objective type questions. **Each** question carries **two (2)** marks. **All** questions are **compulsory**.

1. Earth's only natural satellite is
  - (A) Sun
  - (B) Mercury
  - (C) Moon
  - (D) Venus
2. Each planet is roughly twice as far from the sun as its closest neighbour and this is known as
  - (A) Nebular hypothesis
  - (B) Bode's law
  - (C) Darcy's law
  - (D) Coulomb's law
3. The average gravitational force of the Earth is
  - (A)  $98 \text{ cm/s}^2$
  - (B)  $980 \text{ cm/s}^2$
  - (C)  $9800 \text{ cm/s}^2$
  - (D)  $9500 \text{ cm/s}^2$
4. Amongst the following terrestrial bodies the lowest mean density is shown by
  - (A) Venus
  - (B) Moon
  - (C) Mars
  - (D) Mercury
5. Uniformitarianism states
  - (A) Everything tends towards stable equilibrium
  - (B) The present is key to the past
  - (C) The present is key to the future
  - (D) Order comes out of chaos
6. The interface separating the continental crust into an upper crustal layer and a lower crustal layer is called
  - (A) Moho discontinuity
  - (B) Gutenberg discontinuity
  - (C) Conrad discontinuity
  - (D) 660 kms seismic discontinuity
7. The inner core of the earth is believed to be
  - (A) Solid
  - (B) Molten
  - (C) Chiefly felsic
  - (D) Chiefly silicic
8. Which pair of the following minerals have hardness less than 2.5 ?
  - (A) Halite and gypsum
  - (B) Fluorite and sulfur
  - (C) Tale and graphite
  - (D) Hornblende and diopside



9. Granulitic rocks are characteristics of
- (A) High temperature and low pressure metamorphic conditions
  - (B) Low temperature and high pressure metamorphic conditions
  - (C) High temperature and high pressure metamorphic conditions
  - (D) Burial metamorphic conditions
10. If the axial plane of a fold is horizontal, it is called as
- (A) Chevron fold
  - (B) Isoclinal fold
  - (C) Tight fold
  - (D) Recumbent fold
11. Which of the following rocks would normally contain greater than 18% of MgO ?
- (A) Granite
  - (B) Syenite
  - (C) Gabbro
  - (D) Komatiite
12. Epithermal mineralisation signifies an event of
- (A) Mineralisation formed by hydrothermal activity at low temperature
  - (B) Mineralisation by residual concentration process
  - (C) Mineralisation by primary cooling of Magma
  - (D) Mineralisation by mixing of magma at very high temperature
13. Which of the following sedimentary environment is not due to wave and tidal currents ?
- (A) Glacial
  - (B) Alluvial fans
  - (C) Deltaic
  - (D) Deep Marine
14. The common structure formed due to wave action in the sediments
- (A) Scour marks
  - (B) Mud cracks
  - (C) Graded bedding
  - (D) Ripple marks
15. Pipes or narrow funnel shaped bodies filled with juvenile magnetic material are known as
- (A) Xenoliths
  - (B) Diatremes
  - (C) Caldera
  - (D) Dyke
16. Which of the following is the name of partly melted rock layer on which the plates move ?
- (A) Lithosphere
  - (B) Hydrosphere
  - (C) Outer core
  - (D) Asthenosphere



17. Lamination is the structure characteristically seen in the following rock.
- (A) Limestone
  - (B) Conglomerate
  - (C) Shale
  - (D) Sand stone
18. Fine grained aluminous rich sediments are called
- (A) Argillaceous rocks
  - (B) Carbonate rocks
  - (C) Marls
  - (D) Aranceous rocks
19. What drives the earth's internal heat engine ?
- (A) Radioactivity
  - (B) Solar Energy
  - (C) Earth's magnetic force
  - (D) Crust-mantle boundary reaction
20. Volcanism is associated with which one of the following types of plate boundaries ?
- (A) Only convergent plate boundaries
  - (B) Only divergent plate boundaries
  - (C) Along transform fault plate boundaries
  - (D) Divergent transform and convergent plate boundaries
21. The force due to the rotation of the earth is known as
- (A) Pressure gradient force
  - (B) Fractional force
  - (C) Gravity force
  - (D) Coriolis force
22. \_\_\_\_\_ is an example of sea floor spreading.
- (A) San Marina trench
  - (B) San Andreas fault
  - (C) Mid Atlantic ridge
  - (D) Rocky and Andes Mountains
23. Near surface studies indicate that the geothermal gradient is about  $30^{\circ}\text{C}$  per kilometer. If the radius of the earth is about 6000 kilometers, what is the expected temperature at the center (in  $^{\circ}\text{C}$ ) ?
- (A) 800 degree C
  - (B) 1800 degree C
  - (C) 18000 degree C
  - (D) 180000 degree C
24. Earthquakes for which depth of focus ranges between 300-700 km are known as
- (A) Shallow focus earthquakes
  - (B) Intermediate focus earthquakes
  - (C) Deep focus earthquakes
  - (D) Normal earthquakes



25. The percentage of oxygen in atmosphere is
- (A) 75
  - (B) 50
  - (C) 21
  - (D) 32
26. Photochemical reactions normally take place in
- (A) Exosphere
  - (B) Chemosphere
  - (C) Lithosphere
  - (D) Below the lithosphere
27. At what latitude and during what season in the daily averaged isolation at the top of the atmosphere is the greatest ?
- (A) Equator and equinox
  - (B) Equator on 5<sup>th</sup> Jan.
  - (C) South pole on Dec. 21<sup>st</sup>
  - (D) North pole on June 21<sup>st</sup>
28. How big is the rate of terrestrial radiation emission from the earth surface compared to the solar radiation that arrives at the top of the atmosphere ?
- (A) 150%
  - (B) 110%
  - (C) 70%
  - (D) 50%
29. The atmosphere is made up almost entirely of
- (A) Nitrogen and Argon
  - (B) Nitrogen and Oxygen
  - (C) Nitrogen, Oxygen and Argon
  - (D) Chlorine, Hydrogen and Carbondioxide
30. Which are critical to the geochemical reactions of the biosphere ?
- (A) Insects
  - (B) Microorganisms
  - (C) Animals
  - (D) Human activities
31. The largest reservoir of unfrozen fresh water is
- (A) Ground water
  - (B) Lakes
  - (C) Streams
  - (D) Atmosphere
32. The concentration of green element in sea water is a function of
- (A) Its rate of removal
  - (B) Its rate of addition
  - (C) Its rate of removal and its rate of addition
  - (D) Its type and affinity towards water
33. Which of the following is a fresh water lake ?
- (A) Wuler
  - (B) Chilka
  - (C) Pulicat
  - (D) Sambher



34. The chlorinate of the sea water is referred as
- (A) Total amount in grams of chloride in one kg of sea water
  - (B) Total amount in grams of chloride and bromide in one kg of sea water
  - (C) Total amount in grams of chloride, bromide and iodine in one kg of water
  - (D) Total amount in grams of chloride and carbonates in one kg of sea water
35. Lowering of the water table can result in all of the following except
- (A) Sinkhole formation
  - (B) Surface subsidence
  - (C) Compaction of aquifer rocks
  - (D) Hardening of the water
36. Karst topography is predominantly associated with
- (A) Limestone
  - (B) Granite
  - (C) Basalt
  - (D) Shale
37. India has been divided into \_\_\_\_\_ heat flow zones.
- (A) 3
  - (B) 5
  - (C) 7
  - (D) 10
38. Badami and Kaladgi group belongs to \_\_\_\_\_ age.
- (A) Proterozoic
  - (B) Archaean
  - (C) Cretaceous
  - (D) Quarternary
39. Which one of the following formation does not represent the cretaceous of Gondwana ?
- (A) Jabalpur formation
  - (B) Chikiala formation
  - (C) Gangapur formation
  - (D) Panchet formation
40. The Panjal Volcanics in Kashmir basin, stratigraphically represents
- (A) Lower Permian
  - (B) Lower carboniferous
  - (C) Devonian
  - (D) Cambrian
41. Which one of the following is in great demand but is short supply in India ?
- (A) Asbestos
  - (B) Manganese
  - (C) Gold
  - (D) Chromite



42. Petroleum is mainly confined to  
(A) Gondwana group of rocks  
(B) Cambrian formations  
(C) Tertiary formations  
(D) Archean rocks
43. Which of the following elements is very essential components of food chain ?  
(A) Sodium  
(B) Potassium  
(C) Carbon  
(D) Iron
44. Abundance of Nitrates and Phosphates in water encourages the growth of plants including Algae. This condition is known as  
(A) Eutrophication  
(B) Degeneration  
(C) Stagnation  
(D) Decomposition
45. An ecosystem involves  
(A) Biotic and abiotic components  
(B) Only biotic component  
(C) Only abiotic component  
(D) Broader environmental system where components cannot be characterised
46. What type of chemical energy is stored in a plant ?  
(A) Kinetic                      (B) Potential  
(C) Solar                        (D) Radiant
47. "Minamata" disease is caused due to  
(A) Air Pollution  
(B) Nuclear Pollution  
(C) Sea Water Pollution  
(D) Mercury Pollution
48. "Tsunami" is developed due to  
1. Oceanic quakes  
2. Floods  
3. Volcanic eruption within oceans  
4. Cyclones  
(A) 1 and 3 are correct  
(B) 1 and 2 are correct  
(C) 3 and 4 are correct  
(D) All are correct
49. The vertical motion of rocks relative to surface is termed  
(A) Isostasy  
(B) Orogeny  
(C) Exhumation  
(D) Epeirogeny
50. The main use of fossil is  
(A) Stratigraphic correlation  
(B) Understanding the composition of fossil bearing rocks  
(C) To know the past life  
(D) To understand plate tectonics



Total Number of Pages : 8

ಚಿತ್ತು ಬರಹಕ್ಕಾಗಿ ಸ್ಥಳ  
Space for Rough Work