

Total No. of Printed Pages: 06

No. of Questions : 50

**Dr. Babasaheb Ambedkar Marathwada University, Chhatrapati Sambhajinagar**  
**PET 2024 (9014) Doctor of Philosophy(Geology)**

(To be filled by the Candidate)

Candidate Seat Number  
(As per Admit card)

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OMR Sheet Number

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Invigilator's signature with Date

Candidate's Seat No. in Words : \_\_\_\_\_

Name of the Center : \_\_\_\_\_

Paper Code &amp; Name of Examination : 9014 - Doctor of Philosophy(Geology)

Date: 03/10/2024

PET 2024 - EXAMINATION

Time: One Hours

Total Marks: 100

**Important Instructions for the candidate**

- Write your seat number and OMR Sheet number on the question paper in the earmarked space
- This question paper carries Fifty (50) Multiple-choice type questions and each question carries 2 Marks
- At the commencement of examination, the question paper will be given to the student.
- Each question 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 question  
Example: where (C) is correct answer

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- Your responses to the answer are to be indicated in the OMR Sheet. If you mark at any place other than in the circle in the OMR Sheet it will not be evaluated.
- Rough work is to be done at the end of this question paper.
- You have to return OMR answer sheet and question paper to the invigilator at the end of examination compulsorily and must not carry with you outside the examination hall.
- Use only Black / Blue ball point pen
- Use of any type of calculator or log table etc. is prohibited.
- There is no negative marking for incorrect answers

**विद्यार्थ्यांसाठी महत्त्वाच्या सूचना**

- परीक्षार्थींनी आपला आसन क्रमांक या पृष्ठावरील वरच्या कोपऱ्यात तसेच आपणास दिलेल्या उत्तर पत्रिकेचा क्रमांक त्याखाली लिहावा.
- या प्रश्नपत्रिकेतील सर्व प्रश्न सोडवणे अनिवार्य आहे.
- परीक्षा सुरू झाल्यावर विद्यार्थ्यांला प्रश्नपत्रिका दिली जाईल.
- प्रत्येक प्रश्नासाठी (A) (B) (C) (D) अशी चार विकल्प उत्तरे दिली आहेत, त्यातील योग्य उत्तराचा रकाना खाली दर्शविल्याप्रमाणे ठळकपणे काळा निळा करावा.  
उदा: जर (C) हे उत्तर योग्य असेल तर

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- या प्रश्नपत्रिकेतील प्रश्नांची उत्तरे ओएमआर उत्तर पत्रिकेतच दर्शवावीत इतर ठिकाणी लिहिलेली उत्तरे तपासली जाणार नाहीत.
- प्रश्नपत्रिकाच्या शेवटी कोऱ्या जागेवरच कच्चे काम करावे
- परीक्षा संपल्यानंतर विद्यार्थ्यांनी मूळ ओ. एम. आर उत्तरपत्रिका पर्यवेक्षकाकडे परत करणे आवश्यक आहे तथापि प्रश्नपत्रिका व ओ. एम. आर. उत्तरपत्रिका आपल्याबरोबर नेण्यास विद्यार्थ्यांला परवानगी नाही.
- फक्त काळ्या किंवा निळ्या बॉलपेनचाच वापर करावा
- कॅल्क्युलेटर किंवा लॉग टेबल वापरण्यास परवानगी नाही
- चुकीच्या उत्तरासाठी गुण कपात केली जाणार नाही

- | Q. No. | Question  |
|--------|---|
| 1.     | Effective porosity formula _____<br>(A) $n_{peff} = V_{tot} - V_{peff}$ (B) $n_{peff} = V_{peff} / V_{tot}$<br>(C) $n_{peff} = V_{tot} / V_{peff}$ (D) $n_{peff} = V_{tot} + V_{peff}$              |
| 2.     | _____ map indicates the information about groundwater volume which are potentially available for exploitation?<br>(A) Contour map (B) Isotherm lines<br>(C) Isobar map (D) Groundwater prospect map |
| 3.     | According to B.I.S standards the Total Alkalinity is _____<br>(A) 100-200 mg/l (B) 200-600 mg/l<br>(C) 600-1200 mg/l (D) 1200-1600 mg/l   |
| 4.     | “Gondwanaland” term coined by _____<br>(A) Wegner (1900) (B) Hutton (1890)<br>(C) Morris (1850) (D) Medlicot (1872)   |
| 5.     | Which of the following is the youngest<br>(A) Karewas (B) Lameta b=Beds<br>(C) Singhbhum Granite (D) Muth Quartzite   |
| 6.     | The resulting ratio of O to Si in Sorosilicate is _____<br>(A) 7 (B) 4.5<br>(C) 3.5 (D) 2   |
| 7.     | Chalcedony is fibrous variety of which _____ mineral<br>(A) Quartz (B) Mica<br>(C) Asbestos (D) Talc  |
| 8.     | Amphibole crystallize in _____<br>(A) Trigonal System (B) Hexagonal System<br>(C) Triclinic System (D) Monoclinic System  |
| 9.     | The total number of Bravais lattice is _____<br>(A) 32 (B) 14<br>(C) 16 (D) 30  |
| 10.    | The last mineral to crystallize from magma according to Bowen’s Continuous series is _____<br>(A) Albite (B) Biotite<br>(C) Quartz (D) Olivine  |
| 11.    | Mineral _____ most abundantly present in Igneous rocks<br>(A) Mica (B) Iron<br>(C) Feldspar (D) Aluminium   |
| 12.    | _____ type of Metamorphism is caused by high pressure and high temperature imposed over a large volume of crust<br>(A) Burial (B) Contact<br>(C) Regional (D) Cataclastic                           |

13. Which of the following sets is arranged in decreasing order of metamorphic grade  
 (A) Phyllite-Gneiss-Shale (B) Phyllite-Slate-Shale  
 (C) Gneiss-Slate-Phyllite (D) Shale-Slate-Phyllite
14. The rate of cooling of magma or lava is reflected by the \_\_\_\_\_ of the rock  
 (A) Density (B) Mineralogy  
 (C) Colour (D) Texture
15. Herringbone texture is represented by \_\_\_\_\_ environment  
 (A) Tidal (B) Glacial  
 (C) Fluvial (D) Arid
16. How old are the oldest fossils recorded on Earth  
 (A) >4.8 Ga (B) >4 Ga  
 (C) > 3 Ga (D) <1 Ga
17. Age of Trilobite  
 (A) Ordovician to Jurassic (B) Permian to Neogene  
 (C) Cambrian to Cretaceous (D) Cambrian to Permian
18. Sphalertie is the ore of \_\_\_\_\_  
 (A) Zinc (B) Copper  
 (C) Aluminium (D) Iron
19. Which of the following rock has highest load bearing capacity  
 (A) Limestone (B) Compact Basalt  
 (C) Marble (D) Sandstone
20. \_\_\_\_\_ is the arrangement made near top of the dam for passage of excess water from the reservoir  
 (A) Spillway (B) Sluice way  
 (C) Abutment (D) Gallery
21. The shape of Earth dams are generally \_\_\_\_\_  
 (A) Circular (B) Rectangular  
 (C) Trapezoidal (D) Triangular
22. System that records the energy naturally emitted and reflected from the item and uses the Sun as a source of electromagnetic energy is known as  
 (A) Active Remote Sensing (B) Passive Remote Sensing  
 (C) Global Positioning System (D) Passive Remote Sensing
23. The point just vertically below the observer's position, in celestial sphere is called  
 (A) Nadir (B) Celestial point  
 (C) Pole (D) Zenith
24. A horizontal tunnel parallel to the strike of the lode or vein is known as  
 (A) Crosscut (B) Shaft  
 (C) Adit (D) Drift or Drive
25. The coal having highest percentage of carbon i.e. 80% to 90% is known as  
 (A) Peat (B) Anthracite  
 (C) Bituminous (D) Lignite

26. The first step of research is  
 (A) Selection of Coordinator (B) Selection of research area  
 (C) Searching the research topic (D) Identifying the problem
27. To test the null hypothesis, a researcher uses  
 (A) ANOVA (B) T test  
 (C) Factorial analysis (D)  $X^2$
28. Research problem is selected from the stand point of  
 (A) Self Interest (B) Financial support  
 (C) Social relevance (D) Availability of facility
29. Which research refers to scientific study and research that seeks to solve practical problem?  
 (A) Basic Research (B) Correlational  
 (C) Explanatory (D) Applied Research
30. Which of the following is the Ordinal data  
 (A) Rank numbe, Education (B) Age, weight, income  
 (C) Gender (D) Religion
31. The Probability sampling is  
 (A) Convenience (B) Snowball  
 (C) Systematic (D) Quota
32. The method used to studying the Correlation  
 (A) Decision Criterion (B) Scatter Diagram  
 (C) T-Test (D) Chi- Square Test
33. Which methodology is being used in empirical researches?  
 (A) Scientific method (B) Non- Scientific method  
 (C) Inductive method (D) Initiative method
34. The primary goal of educational research is  
 (A) To Increase the socio-economic status of an individual  
 (B) Help the poor people in society  
 (C) Help the personal growth  
 (D) Assist the applicant in becoming a renowned educationalist
35. What refers to inferring about the whole population on the basis of the observations made on a small part  
 (A) Pseudo inference (B) Inductive inference  
 (C) Deductive inference (D) Objective inference
36. Coefficient of Determination is  
 (A) Coefficient of Determination= Explained variation/ Total Variation  
 (B) Coefficient of Determination= Explained variation/+Total Variation  
 (C) Coefficient of Determination= Total Variation/ Explained variation  
 (D) Coefficient of Determination= Total Variation\*Explained variation
37. Z- Test is used for  
 (A) Sample size <10 (B) Sample size is 0-5  
 (C) Sample size 5-10 (D) Sample is >30

38. To measure of frequency with which average article in a journal has been cited in a particular year is known as  
 (A) Citation (B) Impact factor  
 (C) Abstract (D) H-index
39. A researcher selects a probability sample 100 out of the total population is  
 (A) Cluster sample (B) Systematic sample  
 (C) Stratified sample (D) Random sample
40. One of the methods of logical reasoning process is called  
 (A) Induction (B) Experiment  
 (C) Research (D) Deduction
41. Deduction and Induction are the parts of the system of reasoning is stated by  
 (A) Caroline (B) Adward  
 (C) P. V. Young (D) Dewey John
42. Which correlation coefficient best explains the relationship between creativity and intelligence  
 (A) 1.00 (B) 0.60  
 (C) 0.50 (D) 0.30
43. Manipulation is always a part of  
 (A) Descriptive research (B) Fundamental research  
 (C) Historical research (D) Experimental research
44. The basis on which assumptions are formulated  
 (A) Specific Characteristics of the castes  
 (B) University  
 (C) Cultural background of the country  
 (D) Non- Cultural activity
45. A research problem is not feasible only when:  
 (A) It is new and adds something to the knowledge  
 (B) It consists of independent and dependent variables  
 (C) It has utility and relevance  
 (D) It is researchable
46. Research which follows a case study method is called as  
 (A) Casual (B) Analytical  
 (C) Qualitative (D) Diagnostic
47. The systematic elimination of extraneous variables other than those you are interested it can be achieved in  
 (A) Experimental research (B) Longitudinal research  
 (C) Correlation research (D) Qualitative research
48. Which of the following is the main feature of qualitative research?  
 (A) Avoids positive assumptions and data analysis  
 (B) Subscribes to pre-existing categories  
 (C) Collects data in numerical form  
 (D) Uses the empirical methods of data analysis

49. According to UGC regulations plagiarism, level 1 must be
- |                |                 |
|----------------|-----------------|
| (A) 50% -80%   | (B) Below 10 %` |
| (C) 10 to 40 % | (D) 80% -100%   |
50. Which one of the following is not used for the checking plagiarism?
- |              |                 |
|--------------|-----------------|
| (A) Turnitin | (B) Latex       |
| (C) Urkund   | (D) iThenticate |

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