

Set No. 1

Question Booklet No.

16P/205/22

(To be filled up by the candidate by blue/black ball-point pen)

Roll No.

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Serial No. of OMR Answer Sheet (2016)

Day and Date

(Signature of Invigilator)

INSTRUCTIONS TO CANDIDATES

(Use only **blue/black ball-point pen** in the space above and on both sides of the **Answer Sheet**)

1. Within 30 minutes of the issue of the Question Booklet, check the Question Booklet to ensure that it contains all the pages in correct sequence and that no page/question is missing. In case of faulty Question Booklet bring it to the notice of the Superintendent/Invigilators immediately to obtain a fresh Question Booklet.
2. Do not bring any loose paper, written or blank, inside the Examination Hall *except the Admit Card without its envelope*.
3. *A separate Answer Sheet is given. It should not be folded or mutilated. A second Answer Sheet shall not be provided. Only the Answer Sheet will be evaluated.*
4. Write your Roll Number and Serial Number of the Answer Sheet by pen in the space provided above.
5. *On the front page of the Answer Sheet, write by pen your Roll Number in the space provided at the top and by darkening the circles at the bottom. Also, wherever applicable, write the Question Booklet Number and the Set Number in appropriate places.*
6. *No overwriting is allowed in the entries of Roll No., Question Booklet no. and Set no. (if any) on OMR sheet and Roll No. and OMR sheet no. on the Question Booklet.*
7. *Any change in the aforesaid entries is to be verified by the invigilator, otherwise it will be taken as unfair means.*
8. *Each question in this Booklet is followed by four alternative answers. For each question, you are to record the correct option on the Answer Sheet by darkening the appropriate circle in the corresponding row of the Answer Sheet, by pen as mentioned in the guidelines given on the first page of the Answer Sheet.*
9. For each question, darken only one circle on the Answer Sheet. If you darken more than one circle or darken a circle partially, the answer will be treated as incorrect.
10. *Note that the answer once filled in ink cannot be changed. If you do not wish to attempt a question, leave all the circles in the corresponding row blank (such question will be awarded zero marks).*
11. For rough work, use the inner back page of the title cover and the blank page at the end of this Booklet.
12. Deposit only **OMR Answer Sheet** at the end of the Test.
13. You are not permitted to leave the Examination Hall until the end of the Test.
14. If a candidate attempts to use any form of unfair means, he/she shall be liable to such punishment as the University may determine and impose on him/her.

Total No. of Printed Pages : 32

[उपर्युक्त निर्देश हिन्दी में अन्तिम आवरण पृष्ठ पर दिये गए हैं]

16P/205/22

ROUGH WORK

रफ़ कार्य

16P/205/22

No. of Questions : 150

प्रश्नों की संख्या : 150

Time : 2 Hours

Full Marks : 450

समय : 2 घण्टे

पूर्णाङ्क : 450

Note : (1) Attempt as many questions as you can. Each question carries 3 (Three) marks. **One mark will be deducted for each incorrect answer. Zero** mark will be awarded for each unattempted question.

अधिकाधिक प्रश्नों को हल करने का प्रयत्न करें। प्रत्येक प्रश्न 3 (तीन) अंकों का है। प्रत्येक गलत उत्तर के लिए एक अंक काटा जायेगा। प्रत्येक अनुत्तरित प्रश्न का प्राप्तांक शून्य होगा।

(2) If more than one alternative answers seem to be approximate to the correct answer, choose the closest one.

यदि एकाधिक वैकल्पिक उत्तर सही उत्तर के निकट प्रतीत हों, तो निकटतम सही उत्तर दें।

01. The youngest rocks of the basaltic crust on the sea floor are found along :

- | | |
|--------------------|------------------------|
| (1) Abyssal plains | (2) Mid oceanic ridges |
| (3) Fracture zones | (4) Subduction zone |

02. The 'Great Boundary Fault' occurs in the region of :

- | | |
|------------|-----------------|
| (1) Alwar | (2) Chittorgarh |
| (3) Jaipur | (4) Haridwar |

03. The fold in which the axes plunges directly down the dip of the axial surface is termed as :
- (1) Normal fold
 - (2) Reclined fold
 - (3) Cascade fold
 - (4) Drag fold
04. Permeability is a measure of the ability of the fluid to :
- (1) Contract when pressure is applied
 - (2) Flow through a porous rock
 - (3) Produce energy when burned
 - (4) None of the above
05. When the minimum principal stress is vertical, the resultant fault is :
- (1) Strike-slip fault
 - (2) Oblique slip fault
 - (3) Normal fault
 - (4) Reverse fault
06. The R . F. of a geological map prepared on a scale of 2cm=1 km. is :
- (1) 1 :50,000
 - (2) 1 :5000
 - (3) 1 :500
 - (4) 1 :100000
07. Hade of a vertical fault will be :
- (1) 90°
 - (2) 45°
 - (3) 0°
 - (4) 40°
08. The point which separates a convex and concave segment of a fold is called :
- (1) Median point
 - (2) Inflexion point
 - (3) Hinge point
 - (4) Crest point
09. Schist represents a material which has mechanical properties as :
- (1) Homogeneous and isotropic
 - (2) Homogeneous and anisotropic
 - (3) Inhomogeneous and anisotropic
 - (4) Inhomogeneous and isotropic

10. The thrust fault will be generated when(where σ_1 is maxi. stress) :
- (1) σ_1 and σ_2 are horizontal (2) σ_1 and σ_3 are horizontal
 (3) σ_2 and σ_3 are horizontal (4) None of the above
11. The "Ring of Fire"- an arcuate belt with the largest number of active volcanoes on earth is found in :
- (1) Atlantic ocean (2) Pacific ocean
 (3) African rift valley (4) Mid oceanic ridges
12. Lithosphere comprises of :
- (1) Crust and Mantle
 (2) Crust, Mantle and Outer core
 (3) Crust and Upper mantle
 (4) Crust and Lower mantle
13. 90° E ridge is located in :
- (1) Antartic ocean (2) Arabian Sea
 (3) Indian ocean (4) None of the above
14. Where do the ophiolite suit of rocks occur :
- (1) Indus suture zone (2) Lesser Himalaya
 (3) Brahmaputra valley (4) Himalayan foot hill zone
15. For obtaining true dip of a bed the minimum number of apparent dip data required is :
- (1) One (2) Two
 (3) Three (4) None of the above

16. A synformal anticline will have :

- (1) Upward arching beds having older rocks in core
- (2) Downward arching beds having older rocks in core
- (3) Upward arching beds having younger rocks in core
- (4) Downward arching beds having younger rocks in core

17. Staurolite crystallizes in :

- (1) Monoclinic
- (2) Orthorhombic
- (3) Hexagonal
- (4) Triclinic

18. Symbol of Trapezohedron :

- (1) hhl
- (2) hll
- (3) hkl
- (4) hol

19. Skew twin observed in :

- (1) Staurolite
- (2) Pyrite
- (3) Plagioclase
- (4) Gypsum

20. In pyrite, twinning is present :

- (1) Genuiculate
- (2) Iron cross
- (3) Mimetic
- (4) Swallo

21. It represented by only one face :

- (1) Pinacoid
- (2) Pedion
- (3) Prism
- (4) Pyramids

22. Which crystal system has one asymmetric class :

- (1) Isometric
- (2) Trigonal
- (3) Monoclinic
- (4) Triclinic

23. Which of the following denotes a class that has no symmetry at all :
- | | |
|----------------|----------------|
| (1) Pinacoidal | (2) Pedial |
| (3) Domatic | (4) Spheroidal |
24. The Bravais lattice of sodium chloride structure is :
- | | |
|-----------------------|-----------------------|
| (1) Primitive cell | (2) Body centred cube |
| (3) Face centred cube | (4) Base centra |
25. In the skew twins the twin plain is :
- | | |
|-----------|-------------------|
| (1) Dome | (2) Bipyrarnid |
| (3) Prism | (4) Side pinacoid |
26. Mineral which crystallizes in orthorhombic form :
- | | |
|------------|----------------|
| (1) Topaz | (2) Beryl |
| (3) Quartz | (4) Tourmaline |
27. Enantiomorphic crystal forms possess :
- | |
|--|
| (1) Only a centre of symmetry |
| (2) Only a plane of symmetry |
| (3) Neither a plane nor a centre of symmetry |
| (4) Both a plane and a centre of symmetry |
28. Open form of intermediate between a prism and a pyramid whose faces cut the vertical axes and one of the horizontal axes :
- | | |
|-----------|---------------------|
| (1) Dome | (2) Pyramid |
| (3) Prism | (4) Diametral Prism |

29. The base centred arrangement of unit cell is found in :

- | | |
|--------------------------|-----------------------|
| (1) Orthorhombic crystal | (2) Triclinic crystal |
| (3) Cubic crystal | (4) Hexagonal crystal |

30. Zircon crystallizes in :

- | | |
|----------------|---------------|
| (1) Isometric | (2) Hexagonal |
| (3) Tetragonal | (4) Triclinic |

31. An interfacial angle is :

- (1) An external angle between a given face and the extension of the adjoining face
- (2) An internal angle between two adjoining faces
- (3) An angle between their faces on the same side of a crystal
- (4) None of these

32. The twin plane is :

- (1) A plane in a twin crystal which is common to both the halves of the crystal and is essentially a plane of symmetry of one of the twins
- (2) A plane in a twin crystal which is common to both the halves of the crystal and is never a plane of symmetry of one of the twins
- (3) A plane in a twin crystal having no definite bearing with plane of symmetry
- (4) 1&2 are correct

33. Which of the following properties can be used to distinguish between Plagioclase feldspar and quartz ?

- | | |
|------------|--------------|
| (1) Lustre | (2) Streak |
| (3) Colour | (4) Cleavage |

34. Choose the Diamagnetic Mineral :

- | | |
|-------------|--------------|
| (1) Pyrite | (2) Ilmenite |
| (3) Calcite | (4) Apatite |

35. Blue Beryl is :

- | | |
|----------------|--------------------|
| (1) Aquamarine | (2) Agate |
| (3) Topaz | (4) (1) & (3) Both |

36. Which of the following mineral does not contain silica :

- | | |
|------------|-----------------|
| (1) Quartz | (2) Muscovite |
| (3) Halite | (4) Plagioclase |

37. A mineral has pearly luster :

- | | |
|-------------|---------------|
| (1) Diamond | (2) Muscovite |
| (3) Opal | (4) Asbestos |

38. Scheelite shows :

- | | |
|-----------------------|------------------------|
| (1) Phosphorescence | (2) Fluorescence |
| (3) Triboluminescence | (4) Thermoluminescence |

39. Optically Negative and has low extinction angles :

- | | |
|----------------|----------------|
| (1) Quartz | (2) Chlorite |
| (3) Hornblende | (4) Actinolite |

40. Quartz is :

- | | |
|-----------------------|-----------------------|
| (1) Positive Uniaxial | (2) Negative Uniaxial |
| (3) Negative Biaxial | (4) Positive Biaxial |

41. Property seen when several grains are viewed collectively under microscope in polarized light :

- | | |
|---------------------|-------------------------|
| (1) Play of colours | (2) Twinkling |
| (3) Pleochroism | (4) Interference figure |

42. The mineralogical Phase Rule is given by the formula :

- | | |
|---------------|---------------|
| (1) $P+F=C-2$ | (2) $P-F=C+2$ |
| (3) $F=C+P-2$ | (4) $P+F=C+2$ |

43. High temperature polymorph of quartz :

- | | |
|---------------|------------------|
| (1) Coesite | (2) Cristobalite |
| (3) Tridymite | (4) Opal |

44. Which of the following is used to measure retardation :

- | | |
|-----------------------|--------------------|
| (1) Bertland lens | (2) Condenser |
| (3) Berek compensator | (4) Iris diaphragm |

45. Diaphaneity is the property related to :

- | | |
|-------------------------|---------------------------|
| (1) Dispersion of light | (2) Transmission of light |
| (3) Reflection of light | (4) Refraction of light |

46. Diamond is exposed to sun, it exhibits :

- | | |
|---------------------|------------------|
| (1) Phosphorescence | (2) Fluorescence |
| (3) Opalescence | (4) Pleochroism |

47. Tantalite and Brookite are examples of :

- | | |
|------------------|----------------|
| (1) Polymorphs | (2) Isomorphs |
| (3) Pseudomorphs | (4) Paramorphs |

48. Highest Birefringence in :

- | | |
|-----------------|----------------|
| (1) Plagioclase | (2) Tourmaline |
| (3) Zircon | (4) Calcite |

49. Which of the following is a homopolar bond ?

- | | |
|-------------------|-------------------------|
| (1) Ionic bond | (2) Covalent bond |
| (3) Metallic bond | (4) Van der Wall's bond |

50. We can know internal structure of minerals from their study by :

- | | |
|-----------------|-------------------|
| (1) X-rays | (2) UV rays |
| (3) Cosmic rays | (4) Visible light |

51. Which of the following is a high pressure variety of silica ?

- | | |
|------------------|----------------|
| (1) Chert | (2) Chalcedony |
| (3) Cristobolite | (4) Coesite |

52. The mineral constituting an example of omission solid solution is :

- | | |
|----------------|---------------|
| (1) Pyrolusite | (2) Pyrite |
| (3) Pyrrhotite | (4) Pigeonite |

53. Fluorite is often characterized by how many sets of cleavage ?

- | | | | |
|-------|-------|----------|-------|
| (1) 5 | (2) 1 | (3) None | (4) 4 |
|-------|-------|----------|-------|

54. The streak of barite or barites is :

- | | |
|-----------|----------------|
| (1) Blue | (2) Colourless |
| (3) White | (4) Yellow |

55. Which of the following minerals display fluorescence ?

- | | |
|----------------|--------------|
| (1) Actinolite | (2) Feldspar |
| (3) Scheelite | (4) Pyrope |

56. Which amongst the following has largest ionic radius ?

- | | |
|-------------|---------------|
| (1) Oxygen | (2) Aluminium |
| (3) Silicon | (4) Magnesium |

57. Which of the following is an orthosilicate ?

- | | |
|-------------|---------------|
| (1) Axinite | (2) Enstatite |
| (3) Quartz | (4) Olivine |

58. The co-ordination number of Na^+ in NaCl is :
(1) 2 (2) 6 (3) 4 (4) 8
59. Ca- bearing olivine is :
(1) Fayalite (2) Monticellite
(3) Tephroite (4) Knebelite
60. Which of the following is not a metamorphic mineral ?
(1) Staurolite (2) Jasper
(3) Olivine (4) Garnet
61. Most common amphibole is :
(1) Hornblende (2) Pigeonite
(3) Anthophyllite (4) Glaucophane
62. Which of the following garnets is used as pathfinder mineral in diamond (kimberlite) exploration ?
(1) Almandine (2) Spessartine
(3) Pyrope (4) Uvaravite
63. Chiastolite is a variety of :
(1) Anorthite (2) Anorthoclase
(3) Andalusite (4) Andradite

64. Which amongst the following minerals crystallize in triclinic system ?

- | | |
|-----------------|---------------|
| (1) Sillimanite | (2) Fayalite |
| (3) Kyanite | (4) Tremolite |

65. Primary magma :

- (1) Is formed by magmatic differentiation
- (2) Is a magma as it exists immediately after separation from its source region
- (3) Is formed by contamination
- (4) Is a fractionated magma

66. Norite is essentially composed of :

- (1) Clinopyroxene and plagioclase feldspar
- (2) Orthopyroxene and Olivine
- (3) Only orthopyroxene
- (4) Orthopyroxene and plagioclase feldspar

67. Alkali granite is essentially composed of

- (1) Alkali feldspar and quartz only
- (2) Alkali and plagioclase feldspars and quartz
- (3) Alkali and plagioclase feldspars, quartz and alkali mafic minerals
- (4) Plagioclase feldspar, quartz and hornblende

68. Plutonic equivalent of phonolite is :

- (1) Mela nepheline syenite (2) Granite
- (3) Syenite (4) Gabbro

69. Alkali feldspar syenite is essentially composed of :

- (1) Both alkali and plagioclase feldspars
- (2) Minerals need microscope to see.
- (3) Only alkali feldspar
- (4) Plagioclase feldspar and biotite

70. What is phaneritic texture in igneous rocks ?

- (1) Minerals are too large to see with naked eye
- (2) Minerals need microscope to see
- (3) Glassy in nature
- (4) Very fine-grained groundmass

71. Mafic minerals in igneous rocks are :

- (1) Light in colour due to presence of *Al* and *Si*
- (2) Dark in colour due to presence of *Fe* and *Mg*
- (3) Dark in colour due to presence of *Al* and *Si*
- (4) Dark in colour due to presence of *Si* and *Fe*

72. Colour Index (CI) of a melanocratic igneous rock varies between :

- (1) 0 and 50
- (2) 35 and 65
- (3) 20 and 65
- (4) 65 and 100

73. Silica contents in a felsic igneous rock is :

- (1) Always less than 55%
- (2) Always more than 66%
- (3) Varies between 55% and 66%
- (4) Varies between 45% and 52%

74. In a peraluminous igneous rock :

- (1) $\text{Al}_2\text{O}_3 > \text{CaO} + \text{Na}_2\text{O} + \text{K}_2\text{O}$
- (2) $\text{Al}_2\text{O}_3 < \text{CaO} + \text{Na}_2\text{O} + \text{K}_2\text{O}$
- (3) $\text{Al}_2\text{O}_3 = \text{CaO} + \text{Na}_2\text{O} + \text{K}_2\text{O}$
- (4) $\text{Al}_2\text{O}_3 > \text{CaO} + \text{K}_2\text{O}$

75. Which of the followings is not an ultramafic igneous rock ?

- (1) Troctolite
- (2) Komatiite
- (3) Peridotite
- (4) Dunite

76. Which of the followings is a best criterion to classify plutonic igneous rocks ?

- (1) Textures
- (2) Essential mineral constituents
- (3) Nature of groundmass
- (4) Mode of occurrences

77. Mineral composition of websterite is :

- (1) Orthopyroxene and olivine
- (2) Clinopyroxene and olivine
- (3) Orthopyroxene and clinopyroxene
- (4) Hornblende and biotite

78. Following oxides are used in TAS classification :

- | | |
|---|---|
| (1) Al_2O_3 and SiO_2 | (2) MgO , CaO and SiO_2 |
| (3) Na_2O , K_2O and MgO | (4) SiO_2 , Na_2O and K_2O |

79. Granularity in an igneous rock defines :

- (1) Degree of crystallization
- (2) Absolute and relative sizes of crystals
- (3) Relationship between crystals and groundmass
- (4) Shape of crystals :

80. Coarse-grained sediments are transported by :

- | | |
|------------------------|-----------------------|
| (1) Traction process | (2) Saltation process |
| (3) Suspension process | (4) None |

81. Particle size range of arenaceous rocks is :

- | | |
|-------------------|---------------|
| (1) 2-4 mm | (2) 1/16-2 mm |
| (3) 1/256-1/16 mm | (4) <1/256 mm |

82. Ripple marks occur on the :

- | | |
|------------------------|------------------------|
| (1) Lower surface | (2) Upper surface |
| (3) Internal structure | (4) External structure |

83. Sole marks occur on the :

- | | |
|------------------------|------------------------|
| (1) Lower surface | (2) Upper surface |
| (3) Internal structure | (4) External structure |

84. Ripple marks with bifurcated crest and ripple index from 2-5 are generated by :

- | | |
|----------|-------------|
| (1) Wave | (2) Current |
| (3) Tide | (4) Storm |

85. Herringbone cross-bedding indicate sedimentation in :

- | | |
|-------------------------|-----------------------------|
| (1) Fluvial environment | (2) Lacustrine environment |
| (3) Tidal environment | (4) Deep marine environment |

86. Graded beds form in marine environments :

- | | |
|----------------------------|---------------------------|
| (1) By traction currents | (2) By turbidity currents |
| (3) By suspension fall out | (4) By debris flow |

87. Quartz arenites contain :

- | | |
|-------------------|-------------------|
| (1) <50% Quartz | (2) 50-75% Quartz |
| (3) 75-95% Quartz | (4) >95% Quartz |

88. Arkoses are sandstones which contain :

- (1) Appreciable amount of feldspar
- (2) Low percentage of feldspar
- (3) Negligible amount of feldspar
- (4) No feldspar

89. Sandstones containing >15% matrix and <75% quartz are classified as :

- (1) Arkose
- (2) Greywacke
- (3) Lithic arenite
- (4) Quartz arenite

90. Lithic arenites are :

- (1) Quartz rich sandstones
- (2) Feldspar rich sandstones
- (3) Rock fragments rich sandstones
- (4) Clay rich sandstones

91. Claystones contain :

- (1) <33% clay
- (2) 33-66% clay
- (3) >66% clay
- (4) >100% clay

92. Argillaceous sediments containing clay between 33-66% are known as :

- (1) Mudstone
- (2) Siltstone
- (3) Claystone
- (4) Dropstone

93. Micrites are orthochems containing crystals :

- (1) $<4\mu\text{m}$ (2) $4 - 10\mu\text{m}$ (3) $>10\mu\text{m}$ (4) $>100\mu\text{m}$

94. Oolites form in :

- (1) Agitated water (2) Calm water
(3) Cool water (4) None

95. Large scale metamorphism associated with increase in both temperature and pressure best defines :

- (1) Contact metamorphism (2) Burial metamorphism
(3) Partial melting (4) Regional metamorphism

96. Alkali amphibole :

- (1) Glaucophane (2) Albite
(3) Muscovite (4) Jadeite

97. Which one of the following is not an agent of metamorphism ?

- (1) Fluid (2) Time
(3) Rock type (4) Heat-temperature

98. What type of metamorphism is associated with the zeolite metamorphic facies ?

- (1) High grade (2) Low grade
(3) Rock melt (4) Intermediate grade

99. Which of the following metamorphic facies is characterized by the pyrope rich garnet+ omphacite assemblage :

- | | |
|-----------------|-----------------|
| (1) Blue Schist | (2) Granulite |
| (3) Eclogite | (4) Greenschist |

100. Migmatite is an example of :

- | | |
|-----------------------|--------------------------|
| (1) Non foliated rock | (2) Weakly foliated rock |
| (3) Strongly foliated | (4) None of above |

101. Ca-poor pyroxene is :

- | | |
|---------------|---------------|
| (1) Pigeonite | (2) Omphacite |
| (3) Enstatite | (4) Jadiete |

102. A amphibole which is characteristic of high temperature :

- | | |
|---------------|----------------|
| (1) Edenite | (2) Hornblende |
| (3) Tremolite | (4) Paragasite |

103. A phase diagram with a specified bulk composition is known as :

- | | |
|----------------------|-------------------|
| (1) Isograde diagram | (2) AFM diagram |
| (3) ACF diagram | (4) Pseudosection |

104. Characteristic mineral of charnockites :

- | | |
|-----------------|-----------------|
| (1) Hypersthene | (2) Pyroxene |
| (3) Garnet | (4) Sillimanite |

105. Stress minerals which are produced in metamorphic rocks under the stress factor ?

- | | |
|----------------|-----------------|
| (1) Kyanite | (2) Sillimanite |
| (3) Cordierite | (4) Olivine |

106. Low grade schist are :

- | | |
|-----------------------|-----------------------|
| (1) Staurolite schist | (2) Garnet schist |
| (3) Chlorite schist | (4) Cordierite schist |

107. In high grade metamorphism, biotite melting indicates :

- | | |
|--------------------|----------------------|
| (1) Rock cooling | (2) Rock hydration |
| (3) Rock uplifting | (4) Rock dehydration |

108. The metamorphic facies diagnostic of subduction zone is :

- | | |
|-----------------------|-------------------------|
| (1) Granulite | (2) Blueschist |
| (3) Pyroxene hornfels | (4) Hornblende hornfels |

109. Who proposed the first geologic-time-scale amongst the following ?

- | | |
|------------|------------|
| (1) Darwin | (2) Hutton |
| (3) Steno | (4) Holmes |

110. Which is the oldest era of the geologic- time-scale ?

- | | |
|-----------------|----------------|
| (1) Hadean | (2) Archean |
| (3) Proterozoic | (4) Palaeozoic |

111. The basic unit of lithostratigraphic classification is :

- | | |
|----------------|-----------|
| (1) Supergroup | (2) Group |
| (3) Formation | (4) Bed |

112. In stratigraphic classification which of the following units is used for igneous and metamorphic rocks ?

- | | |
|------------|---------------|
| (1) System | (2) Period |
| (3) Eon | (4) Lithodeme |

113. In a transgressive sequence which of the following type of sediment accumulation exist ?

- (1) Coarsening upward
- (2) Homogeneous sized sediments
- (3) Alternating coarse and fine sediments
- (4) Fining upward sequence

114. In which part of India full marine Mesozoic succession is exposed ?

- | | |
|--------------------|----------------------|
| (1) Eastern Ghat | (2) Western Ghat |
| (3) Outer Himalaya | (4) Tethyan Himalaya |

115. The total geological span of Mesozoic Era is :

- | | | | |
|------------|------------|------------|------------|
| (1) 175 Ma | (2) 185 Ma | (3) 195 Ma | (4) 205 Ma |
|------------|------------|------------|------------|

116. During which of the following eras, the largest number of palaeogeographic reconstructions took place ?

- | | |
|----------------|-----------------|
| (1) Palaeozoic | (2) Cenozoic |
| (3) Mesozoic | (4) Proterozoic |

117. The poor record of marine fauna during Early Triassic is mainly attributed to :

- | | |
|---------------------------------|-----------------------|
| (1) Sudden marine transgression | (2) Abnormal salinity |
| (3) Magnetic reversal | (4) Unusual tectonism |

118. During which of the following times the cretaceous sea was on its peak of transgression as well as having maximum temperature ?

- | | |
|-------------------|--------------|
| (1) Maastrichtian | (2) Albian |
| (3) Campanian | (4) Turonian |

119. The "cyclothems" sedimentation is best observed in

- | | |
|--------------------------|------------------------|
| (1) Jurassic sediments | (2) Triassic sediments |
| (3) Cretaceous sediments | (4) Gondwana sediments |

120. Rajmahal Formation consists of :

- (1) Sedimentary rocks only
- (2) Volcanic rocks only
- (3) Both sedimentary and volcanic rocks
- (4) Volcanic and plutonic igneous rocks

121. Which of the following represents a Lower Gondwana Marine intercalation :

- | | |
|---------------------|----------------------------|
| (1) Umia marine bed | (2) Athgarh Sandstone bed |
| (3) Umia beds | (4) Raghavpurum shale beds |

122. The complete Triassic succession of Spiti region is known as

- | | |
|---------------------|-------------------|
| (1) Lilang Group | (2) Spiti shales |
| (3) Kioto Limestone | (4) Tagling Stage |

123. The modern concepts of stratigraphy is applicable to :

- (1) Sedimentary rocks only
- (2) Sedimentary and volcanic Igneous rocks
- (3) Sedimentary and low grade metamorphic rocks
- (4) Sedimentary Igneous and metamorphic rocks

124. A stratum is a :

- (1) Smallest layered unit of sedimentary rock
- (2) Two layered unit of sedimentary rock
- (3) The whole sedimentary unit of a basin
- (4) Can be a sedimentary rock of any dimension

125. " Present is key to past" is related to :

- (1) Principle of superposition
- (2) Principle of original horizontality
- (3) Principle of original continuity
- (4) Principle of uniformitarianism

126. Select a lithodernic unit from the following :

- (1) System
- (2) Suite
- (3) Period
- (4) Formation

127. The complete palaeozoic succession is found in :

- (1) Kashmir Himalaya
- (2) Eastern ghat
- (3) Western ghat
- (4) Andman Islands

128. Find a chronostratigraphic unit :

- (1) Erathem
- (2) Era
- (3) Supergroup
- (4) Complex

129. Precambrian / cambrian boundary is found at :

- (1) 580 Ma
- (2) 520 Ma
- (3) 540 Ma
- (4) 600 Ma

130. Who gave the basic concept of facies ?

- (1) Walther
- (2) Gresley
- (3) Steno
- (4) Hutton

131. The oldest palaeozoic sediments of kashmir Himalaya belongs to :

- | | |
|--------------------|----------------------|
| (1) Dogra slate | (2) Salkhala group |
| (3) Haimanta group | (4) Thango formation |

132. The igneous activity during palaeozoic era in Kashmir Himalaya is stratigraphically known as :

- | | |
|-------------------|-----------------------|
| (1) Deccan Trap | (2) Panjal Trap |
| (3) Rajmahal Trap | (4) Bhimtal volcanics |

133. The youngest palaeozoic sediments in Kashmir Himalaya is grouped as :

- | | |
|-----------------------------|----------------------|
| (1) Syringothyris limestone | (2) Fenestella shale |
| (3) Zewan formation | (4) Lipak formation |

134. Umaria marine beds are marine intercalatons in :

- | | |
|--------------------|---------------------|
| (1) Karewa Group | (2) Siwalik Group |
| (3) Lower Gondwana | (4) Middle Gondwana |

135 : The beging of Gondwana sedimentation is characterised by deposition of :

- | | |
|---------------------------|-----------------------|
| (1) Laccustrine sediments | (2) Marine sediments |
| (3) Deltaic sediments | (4) Glacial sediments |

136. The lower most subdivision of Damuda group is known as :

- | | |
|-----------------------|--------------------------|
| (1) Baraker formation | (2) Raniganj formation |
| (3) Barren measure | (4) karharbari formation |

137. Epigenetic deposits are formed :

- (1) After the formation of host rock
- (2) Before the formation and the host rock
- (3) At the time of formation of host rock
- (4) All of the above

138. Syngentic deposits are formed :

- (1) At the time and formation of host rock
- (2) After the formation of host rock
- (3) Both of the above
- (4) None of the above

139. Ore deposits formed by mechanical concentration process is also called :

- | | |
|-------------------------|--------------------------|
| (1) Placer deposit | (2) Sedimentary deposits |
| (3) Evaporation deposit | (4) All of the above |

140. The temperature range for the formation of hypothermal deposit is :

- | | |
|---------------|---------------|
| (1) 300-500°C | (2) 300-450°C |
| (3) 300-700°C | (4) 300-400°C |

141. Hydrothermal process of formation of ore deposit is divided into :

- | | |
|--------------------|---------------------|
| (1) Four divisions | (2) Three divisions |
| (3) Six divisions | (4) None of them |

142. The lowest temperature range for the formation of hydrothermal ore deposits is :

- | | |
|----------------------------|----------------------------|
| (1) $<50^{\circ}\text{C}$ | (2) $<100^{\circ}\text{C}$ |
| (3) $<200^{\circ}\text{C}$ | (4) None of the above |

143. 'Porphyry' type copper deposit is found in our country :

- | | |
|------------------|--------------------|
| (1) Malauj khand | (2) Khetri |
| (3) Mosaboni | (4) Dariba-Rajpura |

144. In the cavity filling structure which term is very common :

- | | |
|-------------|------------------|
| (1) Vug | (2) Vein |
| (3) Veinlet | (4) None of them |

145. Placer deposits are formed as a result of :

- | | |
|------------------------------|----------------------------|
| (1) Mechanical concentration | (2) Residual concentration |
| (3) Magneatic concentration | (4) All of the above |

146. Replacement structure is very common in :

- | | |
|-----------------------------|------------------------|
| (1) Hydrothermal deposit | (2) Pegmatitic deposit |
| (3) Pyrometasomatic deposit | (4) Magneatic deposit |

147. Sedimentary magnesite deposit is found :

- | | |
|-----------------|----------------------|
| (1) Pithoragarh | (2) Almora |
| (3) Chamoli | (4) All of the above |

148. Important polymetallic sulphide deposit is found to occur in :

- | | |
|--------------------|-----------------------|
| (1) Rajpura-Dariba | (2) Sukindha |
| (3) Khetri | (4) None of the above |

149. Economic point of view which type of pegmatite is very important :

- | | |
|-----------------------|----------------------|
| (1) Complex pegmatite | (2) Simple pegmatite |
| (3) Both | (4) None of them |

150. Which copper ore is showing peacock colour :

- | | |
|---------------|--------------|
| (1) Bornite | (2) Braunite |
| (3) Malachite | (4) Azurite |

ROUGH WORK

रफ़ कार्य

अभ्यर्थियों के लिए निर्देश

(इस पुस्तिका के प्रथम आवरण पृष्ठ पर तथा उत्तर-पत्र के दोनों पृष्ठों पर केवल नीली-काली बाल-प्वाइंट पेन से ही लिखें)

1. प्रश्न पुस्तिका मिलने के 30 मिनट के अन्दर ही देख लें कि प्रश्नपत्र में सभी पृष्ठ मौजूद हैं और कोई प्रश्न छूटा नहीं है। पुस्तिका दोषयुक्त पाये जाने पर इसकी सूचना तत्काल कक्ष-निरीक्षक को देकर सम्पूर्ण प्रश्नपत्र की दूसरी पुस्तिका प्राप्त कर लें।
2. परीक्षा भवन में लिफाफा रहित प्रवेश-पत्र के अतिरिक्त, लिखा या सादा कोई भी खुला कागज साथ में न लायें।
3. उत्तर-पत्र अलग से दिया गया है। इसे न तो मोड़ें और न ही विकृत करें। दूसरा उत्तर-पत्र नहीं दिया जायेगा। केवल उत्तर-पत्र का ही मूल्यांकन किया जायेगा।
4. अपना अनुक्रमांक तथा उत्तर-पत्र का क्रमांक प्रथम आवरण-पृष्ठ पर पेन से निर्धारित स्थान पर लिखें।
5. उत्तर-पत्र के प्रथम पृष्ठ पर पेन से अपना अनुक्रमांक निर्धारित स्थान पर लिखें तथा नीचे दिये वृत्तों को गाढ़ा कर दें। जहाँ-जहाँ आवश्यक हो वहाँ प्रश्न-पुस्तिका का क्रमांक तथा सेट का नम्बर उचित स्थानों पर लिखें।
6. ओ० एम० आर० पत्र पर अनुक्रमांक संख्या, प्रश्नपुस्तिका संख्या व सेट संख्या (यदि कोई हो) तथा प्रश्नपुस्तिका पर अनुक्रमांक और ओ० एम० आर० पत्र संख्या की प्रविष्टियों में उपरिलेखन की अनुमति नहीं है।
7. उपर्युक्त प्रविष्टियों में कोई भी परिवर्तन कक्ष निरीक्षक द्वारा प्रमाणित होना चाहिये अन्यथा यह एक अनुचित साधन का प्रयोग माना जायेगा।
8. प्रश्न-पुस्तिका में प्रत्येक प्रश्न के चार वैकल्पिक उत्तर दिये गये हैं। प्रत्येक प्रश्न के वैकल्पिक उत्तर के लिए आपको उत्तर-पत्र की सम्बन्धित पंक्ति के सामने दिये गये वृत्त को उत्तर-पत्र के प्रथम पृष्ठ पर दिये गये निर्देशों के अनुसार पेन से गाढ़ा करना है।
9. प्रत्येक प्रश्न के उत्तर के लिए केवल एक ही वृत्त को गाढ़ा करें। एक से अधिक वृत्तों को गाढ़ा करने पर अथवा एक वृत्त को अपूर्ण भरने पर वह उत्तर गलत माना जायेगा।
10. ध्यान दें कि एक बार स्याही द्वारा अंकित उत्तर बदला नहीं जा सकता है। यदि आप किसी प्रश्न का उत्तर नहीं देना चाहते हैं, तो संबंधित पंक्ति के सामने दिये गये सभी वृत्तों को खाली छोड़ दें। ऐसे प्रश्नों पर शून्य अंक दिये जायेंगे।
11. रफ कार्य के लिए प्रश्न-पुस्तिका के मुखपृष्ठ के अंदर वाला पृष्ठ तथा उत्तर-पुस्तिका के अंतिम पृष्ठ का प्रयोग करें।
12. परीक्षा के उपरान्त केवल ओ एम आर उत्तर-पत्र परीक्षा भवन में जमा कर दें।
13. परीक्षा समाप्त होने से पहले परीक्षा भवन से बाहर जाने की अनुमति नहीं होगी।
14. यदि कोई अभ्यर्थी परीक्षा में अनुचित साधनों का प्रयोग करता है, तो वह विश्वविद्यालय द्वारा निर्धारित दंड का/की, भागी होगा/होगी।