Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – Nov/Dec – 2016**

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|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **14CE2004** | **Duration :** | **3hrs** |
| **Sub. Name :** | **Building Materials and Geology** | **Max. marks :** | **100** |

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| **Q. No.** | **Questions** | | | | **Course outcome** | **Marks** |
| **PART-A (40X1=40 MULTIPLE CHOICE QUESTIONS)** | | | | | | |
| 1. | Desired percentage composition of lime? | | | | CO 3 |  |
|  | A. 60-67% | B. 35-70% | C. 35-55% | D. 20-25% |  | (1) |
| 2. | Which component when used in excess results in disintegration of concrete? | | | | CO 3 |  |
|  | A. Alumina | B. Silica | C. Lime | D. Magnesia |  | (1) |
| 3. | Which of the following is not matched correctly?   |  |  |  | | --- | --- | --- | | S.No | Property | Definition | | a | Ductility | A measure of the degree of plastic deformation | | b | Stiffness | A property of material to resist plastic deformation | | c | Flexibility | A property of material which permits considerable bending | | d | Malleability | Material can be flattened into sheets | | | | | CO 3 |  |
|  | a. Ductility | b. Stiffness | c. Flexibility | d. Malleability |  | (1) |
| 4. | What is done to make steel of desired shape? | | | | CO 3 |  |
|  | a. Hot Working | b. Cold Working | c. Galvanizing | d. Electrolysis |  | (1) |
| 5. | What is done to impart necessary properties to steel? | | | | CO 3 |  |
|  | A. Hot Working | B. Cold Working | C. Galvanizing | D. Electrolysis |  | (1) |
| 6. | What can be done to prevent corrosion of steel? | | | | CO 3 |  |
|  | A. Painting | B. Galvanizing | C. Alloying | D. All of the above |  | (1) |
| 7. | The rate of heat evolution of the following four compounds in descending order is   * 1. C3S 2. C2S 3. C3A 4.C4AF | | | | CO 3 |  |
|  | a. 1,2,3,4 | b.3,1,4,2 | c.3,4,1,2 | d.3,4,2,1 |  | (1) |
| 8. | Inner part of a timber log surrounding the pitch, is called | | | | CO 3 |  |
|  | a. Sapwood | b. Cambium layer | c. Heart wood | d. None to these |  | (1) |
| 9. | The cube of concrete as compared to cylinder of concrete is expected to have compressive strength | | | | CO 3 |  |
|  | a. Less by 5% | b. Less by 15% | c. More by 5% | d. More by 15% |  | (1) |
| 10. | Which type of hot working gives a finer Pearlite structure? | | | | CO 3 |  |
|  | A. Annealing | B. Quenching | C. Normalising | D. Tempering |  | (1) |
| 11. | Before testing setting time of cement one should test cement for | | | | CO 3 |  |
|  | a. Soundness | b. Strength | c. Fineness | d. Consistency |  | (1) |
| 12. | Number of bricks required per cubic meter of brick masonry is | | | | CO 3 |  |
|  | a. 400 | b. 450 | c. 500 | d. 550 |  | (1) |
| 13. | What can be done to prevent corrosion of steel? | | | | CO 3 |  |
|  | a. Painting | b. Galvanizing | c. Alloying | d. All of the above |  | (1) |
| 14. | One method of curing of concrete is | | | | CO 3 |  |
|  | a. Ponding | b. Troweling | c. Compaction | d. Plastering |  | (1) |
| 15. | Which method of manufacturing iron uses scrap form of iron? | | | | CO 3 |  |
|  | a. Electric arc | b. Blast furnace | c. Open hearth | d. Electrolysis |  | (1) |
| 16. | What is done to impart necessary properties to steel? | | | | CO 3 |  |
|  | a. Hot Workin | b. Cold Working | c. Galvanizing | d. Electrolysis |  | (1) |
| 17. | Secondary Rocks are product of Which action ? | | | | CO 1 |  |
|  | 1. Wearing | 1. Weathering | 1. Abrasion | 1. None of these |  | (1) |
| 18. | Petrography deals with | | | | CO 1 |  |
|  | a. Descriptive parts of rock & petrogeny | b.Parts of rock | c. Petrogeny | d. Origin of Rock |  | (1) |
| 19. | A delta is made up of sediments \_\_\_\_\_\_\_\_\_\_\_\_ | | | | CO 2 |  |
|  | 1. Deposited at the mouth of a river | 1. Deposited on the inside of a meander loop | c. Deposited at a mountain front | d. Deposited on the outside of a meander loop |  | (1) |
| 20. | Potholes in river bottom bedrock are formed by \_\_\_\_\_ | | | | CO 1 |  |
|  | 1. The impacy of a large rock moved by a strong current which makes a "crater" | 1. The grinding action of a pebble or cobble in a swirling eddy | 1. Cascading water from a waterfall which wears away the rock | d. None of the above |  | (1) |

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| 21. | Barysphere is identified in | | | | CO 2 |  |
|  | 1. Above Lithosphere Accessible Part | 1. Below Lithosphere inaccessible part | 1. Below Lithosphere accessible part | 1. None of the above |  | (1) |
| 22. | At a bend in a river, \_\_\_\_\_\_\_\_\_ occurs on the outside of the bend and \_\_\_\_\_\_\_\_ occurs on the inside of the bend. | | | | CO 1 |  |
|  | 1. Erosion ..... deposition | 1. Deposition ...... erosion | 1. Erosion .......erosion | 1. Deposition ..... deposition |  | (1) |
| 23. | Loosening and breaking of rock masses by the pressure of glacier ice is known as | | | | CO 1 |  |
|  | 1. Glacier quarring | 1. Glacier plucking | 1. Glacier abrasion | 1. Glacier erosion |  | (1) |
| 24. | Swallow holes made by ground water is | | | | CO 1 |  |
|  | 1. Sinkholes | 1. Crag | 1. Dolines | 1. Potholes |  | (1) |
| 25. | Due to marine erosion the Seawater enters the inland spaces and form the \_\_\_\_\_\_\_ | | | | CO 1 |  |
|  | 1. Headlands | 1. Cirques | 1. Bays | 1. None of the above |  | (1) |
| 26. | Glaciers are capable of | | | | CO 1 |  |
|  | a. significant erosion | b. significant deposition | c. significant modification of landscapes | d. all of these |  | (1) |
| 27. | In what types of rock do most caves form? | | | | CO 2 |  |
|  | a. granite | b. shale | c. limestone | d. sandstone |  | (1) |
| 28. | Groundwater represents how much of the world's fresh water supply? | | | | CO 2 |  |
|  | a. about 1% | b. about 5% | c. about 20% | d. about 50% |  | (1) |
| 29. | Particles that roll and slide along the river bottom are called \_\_\_\_\_\_\_\_\_ . | | | | CO 1 |  |
|  | a. bed load | b. suspended load | c. dissolved load | d. none of the above |  | (1) |
| 30. | Granite like rocks suitable for foundation because of ................ | | | | CO 1 |  |
|  | a. Attractive | b. Water Replant | c. Durable, Hard & free from weak plane | d.All the above |  | (1) |
| 31. | Cone shaped accumulation of stream deposits that are commonly found at places where small intermittent streamlets coming down from hill slopes enter the low lands are coined as? | | | | CO 1 |  |
|  | A. Natural Levees | B. Stream Terraces | C. Alluvial Fans | D. Pot holes |  | (1) |
| 32. | Unconsolidated, un-stratified and porous accumulation of particles by wind is termed as | | | | CO 1 |  |
|  | a. Levees | b. Valley | c. Loess | d. Dunes |  | (1) |
| 33. | \_\_\_\_\_\_\_\_\_\_\_ involves incorporating the spatial positions of the major formation boundaries, including the effects of faulting, folding, and erosion | | | | CO 2 |  |
|  | a. Structural framework | b. Rock type | c. Reservoir quality | d. Fluid saturation |  | (1) |
| 34. | \_\_\_\_\_\_\_\_ is used to determine the variation in nature of subsurface materials with increasing depths | | | | CO2 |  |
|  | a. Geodetic survey | b.Geophones | c.Electrical profiling | d.Electrical sounding |  | (1) |
| 35. | \_\_\_\_\_\_\_\_\_ is an unassorted mixture of boulders and clay having an undisputed glacial origin | | | | CO 1 |  |
|  | A. Crag | B. Drift | C. Till | D. Tail |  | (1) |
| 36. | Excess of silica makes brick | | | | CO 3 |  |
|  | a. Brittle on burning | b.To melt on burning | c.To crack on drying | d.To wrap |  | (1) |
| 37. | What type of concrete uses a high pressure jetting system for concreting? | | | | CO 3 |  |
|  | a. Vacuum Concrete | b. Fiber reinforced concrete | c. Shotcrete | d. Polymer concrete |  | (1) |
| 38. | Deep Deposition forms \_\_\_\_\_\_\_\_\_ | | | | CO 1 |  |
|  | a. Beaches | b. Splits and Bars | c. Tombola | d. Coral reeves |  | (1) |
| 39. | What does not deal with sea-level changes by geologic studies? | | | | CO1 |  |
|  | 1. Stacks | 1. Estuaries | 1. Leeves | 1. Beaches |  | (1) |
| 40. | Intake of CO2 by plants are called as | | | | CO2 |  |
|  | a. transpiration | b. evaporation | c. disinfection | d. dilution |  | (1) |

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| **PART B(8 X 5 = 40 MARKS) (ANSWER ANY EIGHT)** | | | |
| 41. | Explain manufacturing process of bricks. | CO 2 | (5) |
| 42. | Write about any 2 tests on concrete. | CO 2 | (5) |
| 43. | Name the different methods of water proofing methods and demonstrate any two methods. | CO 3 | (5) |
| 44. | Describe the effects of faulting. | CO 2 | (5) |
| 45. | Define fault and faulting, fold and folding and joints. | CO 1 | (5) |
| 46. | Sketch a neat layout of anatomy of fold. | CO 1 | (5) |
| 47. | What are potholes? How are they formed? | CO 1 | (5) |
| 48. | Explain external and internal causes of landslides. | CO 2 | (5) |
| 49. | Explain the formation of sedimentary rocks. | CO 1 | (5) |
| 50. | What do you understand by primary and secondary structures. | CO 2 | (5) |
| **PART C( 2 X 10 = 20 MARKS) (ANSWER ANY TWO)** | | | |
| 51. | Expalin the manufacturing process of concrete | CO 1 | (10) |
| 52. | What is meant by engineering geology and geological modelling? Why are they important? | CO 2 | (10) |
| 53. | Elaborate different geographic features caused by glacial erosion? | CO 1 | (10) |

CO 1 – Classify and appreciation of the geologic processes related to the formation of different soils and rocks

CO 2 – define physical and mechanical soil properities commonly used in engineering practice

CO 3 – to impart knowledge on basic building materials

ALL THE BEST