

23/6

ENTRANCE EXAMINATION FOR ADMISSION, MAY 2010.

Ph.D. (COASTAL DISASTER MANAGEMENT)

COURSE CODE : 147

Register Number :



Signature of the Invigilator
(with date)

COURSE CODE : 147

Time : 2 Hours

Max : 400 Marks

Instructions to Candidates :

1. Write your Register Number within the box provided on the top of this page and fill in the page 1 of the answer sheet using pen.
2. Do not write your name anywhere in this booklet or answer sheet. Violation of this entails disqualification.
3. Read each question carefully and shade the relevant answer (A) or (B) or (C) or (D) in the relevant box of the ANSWER SHEET using HB pencil.
4. Avoid blind guessing. A wrong answer will fetch you -1 mark and the correct answer will fetch 4 marks.
5. Do not write anything in the question paper. Use the white sheets attached at the end for rough works.
6. Do not open the question paper until the start signal is given.
7. Do not attempt to answer after stop signal is given. Any such attempt will disqualify your candidature.
8. On stop signal, keep the question paper and the answer sheet on your table and wait for the invigilator to collect them.
9. Use of Calculators, Tables, etc. are prohibited.

1. Hot deserts lie between the latitude of
 (A) 5° and 15° (B) 20° and 30° (C) 35° and 45° (D) 50° and 65°
2. What is the term used for all fragmental volcanic products which are ejected through the vent
 (A) Bomb (B) Lapelli (C) Scoriae (D) Tephra
3. Which of the following is the active highest volcano in the world
 (A) Etna (B) Guallatiri (C) Fujyama (D) Mauna toe
4. Minomata disease is related to
 (A) Nutrient deficiency (B) Pathogens
 (C) Oil spill (D) Methyl mercury
5. The approximate intensity level of the sound which can cause damage to the ear drum is
 (A) 20 dB (B) 60 dB (C) 100 dB (D) 160 dB
6. Sea level is rising result of climatic change during this century is approximately
 (A) 1.5 m (B) 2.0 m (C) 0.8 m (D) 0.5 m
7. Which part of the following State has highest soil erosion
 (A) Gujarat (B) Kerala
 (C) Maharashtra (D) Nagaland
8. Which type of eruption of volcanoes are characterized by quite evolution of mobile lava and no explosive activity
 (A) Plinian (B) Hawaiian
 (C) Vesuvian (D) Volcanian
9. Avalanche is
 (A) A large mass of snow detached from the mountain slope and falling downward
 (B) A river flowing in south India
 (C) A feature developed during wind erosion
 (D) A lake of Alkaline water
10. The mountain which forms the western boundary of the Indian sub continent is called
 (A) Kirthan (B) Hindukush (C) Satpura (D) Aravalli

11. An Indian river that does not form any delta is
(A) The Krishna (B) The Sindh
(C) The Narmada (D) The Cauvery
12. The ocean current allow the oceans to
(A) Become colder year after year
(B) Become warmer year after year
(C) Maintain the same temperature year after year
(D) All the above are wrong
13. During an earthquake, the major destruction is caused by the energy released due to
(A) Sound waves
(B) Light waves
(C) Seismic waves
(D) A combination of sound and seismic waves
14. The oldest era is
(A) Palaeozoic (B) Protoerozoic
(C) Archaeozoic (D) Proteozoic
15. The "Girdle of Fires" refers to the ring of volcanoes around the
(A) Pacific (B) Mediterranean
(C) Atlantic (D) Indian Ocean
16. A vector is
(A) Human parasite (B) Pathogenic protozoan
(C) Disease transmitting host (D) Natural reservoir of disease
17. Chemical erosion is active mainly in the
(A) Glaciated region (B) Karst regions
(C) Arid regions (D) Periglacial regions
18. Trade winds of the northern hemisphere blow from the north-east to south-west due to
(A) Coriolis force (B) Gravitational Force
(C) Centripetal force (D) Centrifugal force

19. If the momentum of a body increases by 20%, then its kinetic energy will increase by
(A) 20% (B) 40% (C) 44% (D) 50%
20. A man is standing on a weighing machine in a lift which is moving. The weighing machine will show MINIMUM reading when the lift is moving:
(A) Upward with uniform speed
(B) Downward with uniform acceleration
(C) Upward with uniform acceleration
(D) In a free fall due to failure of the lift mechanism
21. In fact, the efficiency of a simple machine is
(A) Less than 100% (B) Equal to 100%
(C) More than 100% (D) Always less than 50%
22. A slow running pendulum clock can be speeded up by
(A) Increasing the length of the rod (B) Increasing the weight of the bob
(C) Reducing the length of the rod (D) Reducing the weight of the bob
23. The earth revolves round the sun. This causes:
(A) Formation of day and night (B) Deflection of winds and currents
(C) Change of seasons (D) Differences in longitude and time
24. The study of fossils is known as
(A) Paleontology (B) Petrology
(C) Seismology (D) Bathymetry
25. Silicious deposits formed around Geysers are
(A) Cinders (B) Geyserites
(C) Scoriae (D) Pumice
26. Which of the following places is not situated on the eastern coast of India?
(A) Cochin (B) Puducherry
(C) Vishakhapatnam (D) Mahabalipuram
27. Store house of malarial parasite in man's body is
(A) Liver (B) Blood
(C) Spleen (D) All the above

28. Mutation is
(A) Small variations in nature (B) Large variations in nature
(C) Changes in organogenesis (D) Change in histogenesis
29. In which of the following does the southern most point of Indian territory lie?
(A) Kerala (B) Tamil Nadu
(C) Andhra Pradesh (D) Greater Nicobar
30. Which among the following is closest to the Equator
(A) Chennai (B) Indira Point
(C) Tuticorin (D) Trivandrum
31. Joule stands for the unit of:
(A) Force (B) Momentum
(C) Energy (D) Charge
32. Deficiency diseases are caused due to the deficiency of
(A) Carbohydrates (B) Vitamins
(C) Proteins (D) Fats
33. Petrol used as a fuel in motor vehicles in a mixture of
(A) Alcohols and hydrocarbons (B) Alcohols
(C) Hydrocarbons (D) Organic acids
34. Buffer solution
(A) Keeps the pH value constant in chemical reaction
(B) Decreases the pH value in chemical reactions
(C) Increases the pH value in chemical reactions
(D) First increases then decreases the pH value in chemical reaction
35. Agar-Agar is obtained from
(A) Fish (B) Grass
(C) Sea weed (D) The bark of tree
36. The fertilization of ovum in mammals takes place in
(A) Vagina (B) Uterus
(C) Vestibule (D) Fallopian tube

37. In the northern hemisphere, summer solstice occurs when the sun shines directly at the
- (A) Equator (B) Tropic of Cancer
(C) Arctic Circle (D) Tropic of Capricorn
38. Which of the following is neither an element nor a compound?
- (A) Glucose (B) Carbon (C) Silver (D) Air
39. A mixture of water and alcohol can be separated by
- (A) Permutation (B) Evaporation (C) Distillation (D) Decantation
40. The chemical properties of an atom are determined by its
- (A) Atomic weight (B) Atomic number
(C) Number of isotopes (D) Binding energy
41. An alpha particle consists of
- (A) Two protons and two neutrons (B) Four Protons
(C) Two protons and two electrons (D) Two protons only
42. Atoms of the same atomic number but different atomic weights are known as
- (A) Polymers (B) Isomers (C) Isotopes (D) Isobars
43. Pyrophosphoric acid has the chemical formula
- (A) H_3PO_4 (B) $H_4P_2O_7$ (C) HPO_3 (D) H_3PO_3
44. The lightest metal is
- (A) Li (B) Mg (C) Ca (D) Na
45. A gas which turns brown on exposure to air is
- (A) CO_2 (B) NO (C) N_2O (D) Br_2
46. The most electronegative element is
- (A) Sodium (B) Fluorine (C) Hydrogen (D) Bromine
47. Deep seated earthquakes are practically restricted to
- (A) Mid-Oceanic ridges (B) Mediterranean
(C) Circum-Pacific zone (D) Trans Asiatic

48. The earthquake is said to be deep when the depth of origin is more than
 (A) 58 km (B) 110 km (C) 200 km (D) 300 km
49. The Planets on either side of the earth are
 (A) Mercury and Venus (B) Mars and Jupiter
 (C) Mars and Venus (D) Venus and Saturn
50. The maximum depth of origin of earthquake so far recorded in the range of
 (A) 300-400 km (B) 400-500 km
 (C) 500-600 km (D) 700-800 km
51. The elongate ridge of sand or gravel that projects from land and ends in open water is known as
 (A) Spit (B) Drumlin (C) Talus (D) Terrace
52. Lunar lake of India is thought to have been resulted
 (A) Due to folding of rocks (B) Due to meteorite impact
 (C) In the crater of volcano (D) Due to block faulting
53. In which of the following does the southern most point of Indian territory lie?
 (A) Kerala (B) Tamil Nadu
 (C) Andhra Pradesh (D) Great Nicobar
54. Finland is also called Suomi due to
 (A) Nearly absence of lakes (B) Numerous lakes
 (C) Numerous hillocks (D) Nearly absence of hillocks
55. A delta shoreline is often said to be
 (A) Shoreline of emergence (B) Prograded shoreline
 (C) Shoreline of submergence (D) Netural shoreline
56. An isolated hill surrounded by a lava flow is called
 (A) Monadnock (B) Steptoe
 (C) Atolls (D) Adventine cone
57. In a wave, the motion of particle is in horizontal direction, normal to propogation direction is called
 (A) Love wave (B) Rayleigh wave
 (C) Secondary wave (D) Primary wave

58. Kalahari desert is in
(A) Africa (B) India (C) China (D) U.S.S.R
59. Trenches are the site of
(A) Converging currents (B) Diverging currents
(C) Massive folding (D) No currents present
60. The best fit of the continents on the sides of Atlantic and Indian Ocean, according to Bullard is at a depth of
(A) 500 fathoms (B) 700 fathoms
(C) 1000 fathoms (D) 1200 fathoms
61. India began to separate from Africa about
(A) 110 – 130 million years ago (B) 80 – 100 million years ago
(C) 170 – 190 million years ago (D) 65 – 50 million years ago
62. Trenches are characterized by
(A) Positive gravity anomaly (B) Negative gravity anomaly
(C) Normal gravity (D) None of the above
63. Islands, Island arc and continental margins are the examples of
(A) Transitional crust (B) Continental crust
(C) Oceanic crust (D) None of the above
64. Orogenic forces are generally found to be responsible for the formation of
(A) Block mountain (B) Volcanic mountain
(C) Fold mountain (D) Plateau
65. When two continental plates collides
(A) Oceanic volcanoes forms
(B) Great mountain chains forms
(C) Island arc forms
(D) Both oceanic volcanoes and island arc forms
66. When an oceanic plate collides with a continental plate
(A) Oceanic plate goes beneath the continental plate
(B) Continental plate goes beneath the oceanic plate
(C) Any one can go beneath the other plate
(D) None of the above

67. Telluric current arise in
 (A) Ionosphere (B) Lithosphere
 (C) Atmosphere (D) Asthenosphere
68. In the transform fault, where the faults extends away from the ridge, there occurs
 (A) Shallow earthquakes (B) No earthquakes
 (C) Deep earthquakes (D) Intermediate earthquakes
69. The present ages of three persons are in proportions 4 : 7 : 9. Eight years ago, the sum of their ages was 56. Find their present ages (in years)
 (A) 20, 35, 45 (B) 8, 20, 28 (C) 16, 28, 36 (D) 20, 36, 46
70. In 10 years, A will be twice as old as B was 10 years ago. If A is now 9 years older than B, the present age of B is
 (A) 29 years (B) 19 years (C) 49 years (D) 39 years
71. The ratio of the speeds of two trains is 7 : 8. If the second train runs 400 kms in 4 hours, then the speed of the first train is
 (A) 70 km/hr (B) 75 km/hr (C) 84 km/hr (D) 87.5 km/hr
72. In a camp, 95 men had provisions for 200 days. After 5 days, 30 men left the camp. For how many days will the remaining food last now?
 (A) 180 (B) 285 (C) 139 16/19 (D) 28.5
73. A vendor loses the selling price of 4 oranges on selling 36 oranges. Her loss percent is
 (A) 10% (B) 11 1/9%
 (C) 12 1/2% (D) None of the above
74. At what time between 9 and 10 o'clock will the hands of a watch be together?
 (A) 45 min past 9 (B) 50 min past 9
 (C) 49 1/11 min past 9 (D) 48 2/11 min past 9
75. What is the smallest number by which 3600 be divided to make it a perfect cube?
 (A) 9 (B) 450 (C) 50 (D) 300
76. A two-digit number is such that the product of the digits is 8. When 18 is added to the number, then the number is reversed. The number is
 (A) 18 (B) 42 (C) 81 (D) 24

77. The edges of a cuboid are in the ratio $1 : 2 : 3$ and its surface area is 88 cm^2 . The volume of the cuboid is
(A) 24 cm^3 (B) 48 cm^3 (C) 64 cm^3 (D) 120 cm^3
78. In a school 10% of the boys are same in number as $\frac{1}{4}$ th of the girls. What is the ratio of boys to girls in the school?
(A) $3 : 2$ (B) $5 : 2$ (C) $2 : 1$ (D) $4 : 3$
79. A Compiler is _____
(A) a combination of computer hardware
(B) a program which translates from one high-level language to another
(C) a program which translates from one high-level to a machine level
(D) none of these
80. When a key is pressed on the keyboard, which standard is used for converting the keystroke into the corresponding bits
(A) ANSI (B) ASCII (C) EBCDIC (D) ISO
81. A Pixel is
(A) A computer program that draws picture
(B) A picture stored in secondary memory
(C) The smallest resolvable part of a picture
(D) None of these
82. Which device is used as the standard pointing device in a Graphical User Environment?
(A) Keyboard (B) Mouse (C) Joystick (D) Track ball
83. Which number system is usually followed in a typical 32-bit computer?
(A) 2 (B) 10 (C) 16 (D) 32
84. Which of the following is not an output device?
(A) Scanner (B) Printer
(C) Flat Screen (D) Touch Screen
85. Which of the following devices have a limitation that we can only information to it but cannot erase or modify it
(A) Floppy Disk (B) Hard Disk
(C) Tape Drive (D) CDROM

86. Which technology is used in Compact disks?
(A) Mechanical (B) Electrical
(C) Electro Magnetic (D) Laser
87. Which of the following storage devices can store maximum amount of data?
(A) Floppy Disk (B) Hard Disk
(C) Compact Disk (D) Magneto Optic
88. Which of the following is the largest manufacturer of Hard Disk Drives?
(A) IBM (B) Seagate (C) Microsoft (D) 3M
89. Geophysics is a study of
(A) Physics of earth (B) History of earth
(C) Geographical distribution of earth (D) None of the above
90. Stratigraphy is the
(A) Study of the stratum of earth (B) Study of fossils
(C) Study of birds (D) All the above
91. Karst topography is formed in
(A) Limestone (B) Sandstone
(C) Charnockite (D) None of the above
92. Oxbow lake is formed at the
(A) Youthful stage (B) Mature stage
(C) Youthful and mature stage (D) None of the above
93. A material 'B' has twice the specific resistance of 'A'. A circular wire made of 'B' has twice the diameter of a wire made of 'A'. Then for the two wires to have the same resistance, the ratio A / B of their respective lengths must be
(A) 2 (B) 1/2 (C) 4 (D) 1/3
94. In a region, steady and uniform electric and magnetic fields are present. These two fields are parallel to each other. A charged particle is released from rest in this region. The path of the particle will be a
(A) circle (B) helix (C) straight line (D) ellipse

95. Needles N1, N2 and N3 are made of a ferromagnetic, a paramagnetic and a diamagnetic substance respectively. A magnet when brought close to them will
- (A) attract all three of them
 - (B) attract N1 and N2 strongly but repel N3
 - (C) attract N1 strongly, N2 weakly and repel N3 weakly
 - (D) attract N1 strongly, but repel N2 and N3 weakly
96. A player caught a cricket ball of mass 150 g moving at a rate of 20 m/s. If the catching process is completed in 0.1 s, the force of the blow exerted by the ball on the hand of the player is equal to
- (A) 300 N
 - (B) 150 N
 - (C) 3 N
 - (D) 30 N
97. A ball of mass 0.2 kg is thrown vertically upwards by applying a force by hand. If the hand moves 0.2 m which applying the force and the ball goes up to 2 m height further, find the magnitude of the force. Consider $g = 10 \text{ m/s}^2$
- (A) 22 N
 - (B) 4 N
 - (C) 16 N
 - (D) 20 N
98. The maximum velocity of a particle, executing simple harmonic motion with an amplitude 7 mm, is 4.4 m/s. The period of oscillation is
- (A) 100 s
 - (B) 0.01 s
 - (C) 10 s
 - (D) 0.1 s
99. A string is stretched between fixed points separated by 75 cm. It is observed to have resonant frequencies of 420 Hz and 315 Hz. There are no other resonant frequencies between these two. Then, the lowest resonant frequency for this string is
- (A) 10.5 Hz
 - (B) 105 Hz
 - (C) 1.05 Hz
 - (D) 1050 Hz
100. The current I drawn from the 5 volt source will be
- (A) 0.17 A
 - (B) 0.33 A
 - (C) 0.5 A
 - (D) 0.67 A
-