



PhD ENTRANCE EXAM RESULT , VMSBUTU

Answer Key for Civil Engineering Branch

Question	Options
1 : If AIRLINE is written as ENILRIA7, then RAILWAY will be written as	1) YAWILAR8 2) YAWLIAR7 3) YAWILAR7 4) YAWLIAR8
2 : Which number is wrong in the series 2, 6, 15, 31, 56, 93?	1) 31 2) 56 3) 93 4) 6
3 : If PINK is coded as 1691411, then RED will be coded as	1) 1963 2) 1853 3) 1954 4) 1854
4 : Statement 1: A is bigger than B but shorter than C; Statement 2: D is smaller than C and bigger than A; Statement 3: B is greater than D; If statement 1 and statement 2 are true, statement 3 will be	1) "TRUE" 2) "FALSE" 3) uncertain 4) none
5 : Arrange the following words in a meaningful sequence : 1-sun, 2- rain, 3-child, 4-rainbow,5-happy	1) 2, 1, 4, 3, 5 2) 3, 2, 1, 4, 5 3) 2, 1, 3, 4, 5 4) 4, 5, 1, 3, 2
6 : What is the probability of getting two tails when two coins are tossed?	1) 0.3333333333333333 2) 0.1666666666666667 3) 0.5 4) 0.25

Question	Options
7 : A man covers a distance of 110 km between two cities in 10 hours. He travelled partly on foot at 9 km/hr and partly on a bicycle at 15 km/hr. Find the distance travelled on foot.	1) 92 2) 94 3) 60 4) 80
8 : Vikas and Mohan working together can complete a work in 6 days. If Vikas alone completes the same work in 10 days, in how many days Mohan alone can complete the same work?	1) 13 2) 14 3) 15 4) 16
9 : The HCF of $\frac{2}{3}$, $\frac{8}{9}$, $\frac{64}{81}$ and $\frac{10}{27}$ is	1) 0.666666666666667 2) $\frac{160}{3}$ 3) $\frac{2}{81}$ 4) $\frac{160}{81}$
10 : A 60 liter mixture of milk and water contains 10% water. How much water must be added to make water 20% in the mixture?	1) 8 liters 2) 7.5 liters 3) 7 liters 4) 6.5 liters
11 : Who Invented the 3-D printer?	1) Nick Holonyak 2) Elias Howe 3) Chuck Hull 4) Christiaan Huygens
12 : Which Veda depicts the information about the most ancient Vedic age culture?	1) Atharvaveda 2) Samaveda 3) Yajurveda 4) Rig Veda
13 : The first pico satellite of India is-	1) GSAT-4 2) ANUSAT 3) INSAT 4) STUDSAT
14 : Which of the following is known as the Diamond City of India?	1) Aurangabad 2) Jaipur 3) Panna 4) Jhiria

Question	Options
15 : In which year Forest Conservation Act was passed?	<p>1) 1980</p> <p>2) 1988</p> <p>3) 1986</p> <p>4) 1990</p>
16 : What is a hypothesis in research?	<p>1) A conclusion drawn from data analysis</p> <p>2) A summary of research findings</p> <p>3) A measurement of data accuracy</p> <p>4) A statement of predicted relationship between variables</p>
17 : What is the purpose of a literature review in research?	<p>1) To analyze data</p> <p>2) To summarize research findings</p> <p>3) To collect primary data</p> <p>4) To identify the research gaps</p>
18 : What is a dependent variable in research?	<p>1) The variable that is manipulated by the researcher</p> <p>2) The variable that remains constant throughout the research</p> <p>3) The variable that is measured and observed</p> <p>4) The variable that is not relevant to the research question</p>
19 : What is a research design?	<p>1) A plan for data analysis</p> <p>2) A method for data collection</p> <p>3) A framework for conducting research</p> <p>4) A statistical technique</p>
20 : What is the appropriate statistical analysis for comparing means between two groups?	<p>1) T-test</p> <p>2) Chi-squared test</p> <p>3) Analysis of variance (ANOVA)</p> <p>4) Regression analysis</p>
21 : Quicklime on reaction with water gives	<p>1) calcium hydroxide</p> <p>2) calcium oxide</p> <p>3) calcium carbonate</p> <p>4) none</p>

Question	Options
22 : In any beam, shear stress at extreme fibre and neutral axis are respectively	1) maximum and zero 2) zero and maximum 3) zero and zero 4) maximum and maximum
23 : The angle between the direction of maximum shear plane and principal plane would be	1) 30° 2) 40° 3) 45° 4) 50°
24 : Hooke's law is valid up to	1) Elastic limit 2) Limit of proportionality 3) Yield point 4) Ultimate point
25 : The shape factor of a diamond shaped section for bending about its diametral arise is	1) 1.2 2) 1.5 3) 2 4) 3
26 : As per IS 456:2000, the Span/Effective depth ratio of a cantilever RCC beam is	1) 9 2) 7 3) 20 4) 26
27 : As per IS 800:2007, the limiting value of slenderness ratio for a member subjected to compressive load resulting for wind and earthquake forces is	1) 180 2) 250 3) 210 4) 150
28 : Permissible stress in N/mm ² through the throat of a butt weld should not exceed	1) 200 2) 150 3) 100 4) 75
29 : According to I.S.: 456, slabs which span in two directions with corners held down, are assumed to be divided in each direction into middle strips and edge strips such that the width of the middle strip, is	1) Half of the width of the slab 2) Two-third of the width of the slab 3) Three-fourth of the width of the slab 4) Four-fifth of the width of the slab

Question	Options
30 : Minimum spacing between horizontal parallel reinforcement of the same size should not be less than	<p>1) 1d</p> <p>2) 2.5d</p> <p>3) 3.0d</p> <p>4) 3.5d</p>
31 : The term 'frog' means	<p>1) An apparatus to lift brick</p> <p>2) Soaking brick in water</p> <p>3) A depression on the face of the brick</p> <p>4) Vertical joint in a brickwork</p>
32 : Pick up the correct statement from the following	<p>1) The object of classifying soils is to arrange them into groups according to their properties and behavior</p> <p>2) A soil classification system is meant to provide an accepted and systematic method of describing the various types of soils eliminating personal factors</p> <p>3) The first category of soil classification is based on grain size of the soil</p> <p>4) All of these</p>
33 : In the plate loading test for determining the bearing capacity of soil, the size of square bearing plate should be	<p>1) Less than 300 mm</p> <p>2) Between 300 mm and 750 mm</p> <p>3) Between 750 mm and 1 m</p> <p>4) Greater than 1 m</p>
34 : Negative skin friction on piles	<p>1) Is caused due to relative settlement of the soil</p> <p>2) Is caused in soft clays</p> <p>3) Decreases the pile capacity</p> <p>4) All of these</p>
35 : A floating body attains stable equilibrium if it's metacentre is	<p>1) At the centroid</p> <p>2) Above the centroid</p> <p>3) Below the centroid</p> <p>4) Anywhere</p>

Question	Options
36 : Newton's law of viscosity states that shear stress is directly proportional to	<p>1) Velocity gradient</p> <p>2) Viscosity</p> <p>3) Shear strain</p> <p>4) Velocity</p>
37 : Equation of continuity of flow is based on the principle of conservation of	<p>1) Mass</p> <p>2) Momentum</p> <p>3) Force</p> <p>4) none</p>
38 : The pipe flow having Reynolds number greater than 4000 is termed as	<p>1) Laminar</p> <p>2) Transition</p> <p>3) Turbulent</p> <p>4) Uniform</p>
39 : The atmospheric pressure at sea level is	<p>1) 360 mm of mercury</p> <p>2) 600 mm of mercury</p> <p>3) 660 mm of mercury</p> <p>4) 760 mm of mercury</p>
40 : The depth of flow of water in a channel corresponding to the minimum specific energy is known as	<p>1) Hydraulic gradient line</p> <p>2) Hydraulic radius</p> <p>3) Critical depth</p> <p>4) None</p>
41 : The ratio of 5-day BOD of the industry in kg/day and BOD contributed by each person in kg/day is termed as	<p>1) Relative Stability</p> <p>2) Population Equivalent</p> <p>3) TOC</p> <p>4) Oxygen Equivalent</p>
42 : A hydraulic jump is formed when	<p>1) Supercritical flows strike against a subcritical flow</p> <p>2) The two flows of supercritical velocities meet each other</p> <p>3) A subcritical flow strikes against a supercritical flow</p> <p>4) The two flows of subcritical velocities meet each other</p>

Question	Options
43 : Water distribution systems are sized to meet the	1) Maximum hourly demand 2) Average hourly demand 3) Maximum daily demand and fire demand 4) Average daily demand and fire demand
44 : Imhoff cone is used to determine	1) Settleable solids 2) Suspended solids 3) Dissolved solids 4) None
45 : Which one of the following is not a dissolved impurity of water	1) Iron oxide 2) Bacteria 3) Carbon dioxide 4) Calcium carbonate
46 : The best irrigation method that suits area scarcity of irrigation water is	1) Drip irrigation 2) Furrow irrigation 3) Check flooding 4) Sprinkler irrigation
47 : Overturning of vehicles on a curve can be avoided by	1) Compound curve 2) Reverse curve 3) Vertical curve 4) Transition curve
48 : Camber is provided in the road for	1) Getting least stopping distance 2) Getting better sighting distance 3) Effective drainage 4) Counteracting the centrifugal force
49 : Bituminous materials, used in highway construction, are primarily because of their	1) cementing and waterproofing properties 2) load bearing capacity 3) high specific gravity 4) black colour which facilitates road markings
50 : The perpendicular or the oblique distance of the object from the survey line is called as	1) Tie Line 2) Base Line 3) Check Line 4) Offset

Best of luck for the future!