Technical Examination Board, Gandhinagar
Assistant Technical Supervisor (Engineer)
For Ahmedabad Municipal Corporation

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1	The curvature of earth is taken into consideration if the limit of survey is
	(a) 50 to 100 km²
	(b) 100 to 200 km²
	(c) 200 to 250 km²
	✓ (d) More than 250 km²
2	In order to determine natural features such as valleys, rivers lakes etc the surveying preferred is
	(a) City surveying
	(b) Location surveying
	(c) cadastral surveying
	✓ (d) topographical survey
3	The fundamental principie is to work from
	✓ (a) Whole to part
	(b) Part to whole
	(c) lower level to higher level
	(d) higher level to lower level
4	When 1 cm on a map represents 10 m on ground, the representative fraction of the scale is
	(a) 1/10
	(b) 1/100
	• (c) 1/1000
	(d) 1/10000
5	The error in measured length due to sag of chain or tape is known as
	✓ (a) Positive error
	• (b) Negative error
	(c) Compensating error
	(d) Instrumental error
6	In whole circle bearing system N25° 15' W corresponds to
	(a) 115° 15'
	(b) 154° 45'
	(c) 205° 15'
	✓ (d) 334° 45'
7	The process of turning the telescope of a theodolite over its supporting axis through 180° in a vertical plane is called
	✓ (a) transiting
	(b) reversing
	(c) plunging
	(d) any of the above
8	A line tangential to longitudinal curve of the level at the centre of the tube is called
	(a) horizontal axis
	✓ (b) vertical axis
	(c) axis of telescope
	(d) none of the above
9	For removing the parallex
	✓ (a) the eye piece is focused for distinct vision of cross hairs
	(b) the image of the object should be brought in the plane of the cross hairs
	(c) either (a) or (b)
	(d) both (a) and (b)
10	The direct angle may have any value between
	(a) 0° - 90°
	(b) 0° - 120°
	(c) 0° - 180°
	✓ (d) 0° - 360°
11	For water-bound Macadam road the recommended camber is
	✓ (a) 1 in 24 to 1 in 30
	(b) 1 in 30 to 1 in 48
	(c) 1 in 60 to 1 in 80
	(d) 1 in 80 to 1 in 120

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12	The Central Road Organization (CRO)was setup in	
	(a) 1930	
	(b) 1934	
	(c) 1948	
	✓ (d) 1956	
13	The state Highways should have ------ wide carriage way with ------ wide shoulder on each side	
	✓ (a) 5m and 1m	
	(b) 8m and 2m	
	(c) 8m and 2.5m	
	(d) 5m and 1.5m	
14	The value of maximum gradient on hill road is	
	(a) 1 in 5	
	(b) 1 in 10	
	(c) 1 in 15	
	✓ (d) 1 in 20	
15	The type of transition curve recommended by the IRC is	
	✓ (a) Cubic parabola	
	(b) Cubic spiral	
	(c) Lemniscate	
	(d) None of the above	
16	Alignment of a road is finally decided on the bases of	
	(a) Selection of route	
	✓ (b) Field survey	
	(c) Trace cut	
	(d) None of the above	
17	The side drains are provided on both sides of the road way when the road is	
	(a) In cutting	
	✓ (b) Along salient curve	
	(c) Along re-entrant curve	
	(d) All of the above	
18	The CBR method of flexible pavement design gives an idea about	
	(a) The quality of road making material	
	✓ (b) The traffic intensity	
	(c) The characteristics of soil	
	(d) Climatic condition	
19	The longitudinal joins are provided when width of the road is more than	
	(a) 3m	
	(b) 4m	
	✓ (c) 5.5m	
	(d) 6.75m	
20	Due to change in price level, a revised estimate is prepared if the sanctioned estimate exceeds,	
	(a) 2%	
	(b) 2.5%	
	(c) 4%	
	✓ (d) 5%	
21	The brickwork is not measured in cu m in case of	
	(a) One or more than one brick wall	
	(b) Brick work in Arches	
	(c) Reinforced brick work	
	✓ (d) Half brick wall	

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22	The weight of an item is measured correct to nearest
	(a) 1.00kg
	(b) 0.25kg
	✓(c) 0.50 kg
	(d) 0.75 kg
23	The expected out turn of brickwork in cement mortar in foundation and plinth per mason per day is
	✓ a) 1.00 m³
	b) 1.25 m³
	c) 1.50 m³
	d) 1.75 m³
24	As per Indian Standard Specifications, the peak discharge for domestic purposes per capita per minute is taken
	a) 1.80 litres for 5 to 10 users
	b) 1.20 litres for 15 users
	✓ c) 1.35 litres for 20 users
	d) All of the above
25	The detention period in a septic tank is assumed
	a) 20 minutes
	b) 25 minutes
	✓ c) 30 minutes
	d) 40 minutes
26	Anti-siphonage pipe is connected to
	e) Main soil pipe
	✓ f) Bottom of P trap W.C.
	g) Top of P trap W.C.
	h) Side of Water closet
27	Pick up the incorrect statement from the following
	a) Lead is the average horizontal straight distance between the borrow pit and the place of spreading soil
	b) The lead is calculated for each block of the excavated area
	✓ c) The unit of lead is 50 m for a distance upto 500 m
	d) The unit of lead is 1 km where the lead exceeds 2 km
28	A portion of an embankment having a uniform up gradient 1 in 500 is circular with radius 1000 m of the centre line. It subtends 180⁰ at the centre. If height of the bank is 1 m at the lower end, and side slopes 2 : 1, the earth work involved
	a) 26,000 m³
	b) 26,500 m³
	✓ c) 27,000 m³
	d) 27,500 m³
29	A cement concrete road is 1000 m long, 8 m wide and 15 cm thick over the sub-base of 10 cm thick gravel. The box cutting in road crust is
	a) 500 m³
	b) 1000 m³
	c) 1500 m³
	✓ d) 2000 m³
30	For 100 sq m cement concrete (1 : 2 : 4) 4 cm thick floor, the quantity of cement required is
	a) 0.90 m³
	b) 0.94 m³
	c) 0.98 m³
	✓ d) 1.0 m³

31	For 12 mm thick cement plastering 1:6 on 100 sq. m new brick work, the quantity of cement required is,
	a) 0.200 m^3
	b) 0.247 m^3
	c) 0.274 m^3
	✓ d) 0.295 m^3
32	The compressive strength of granite is
	a) 500 to 700 kg/cm^2
	b) 700 to 1300 kg/cm^2
	c) 1300 to 1700 kg/cm^2
	✓ d) 1700 to 2000 kg/cm^2
33	The drop manholes are generally provided in sewers for
	a) Industrial areas
	b) Large townships
	✓ c) Hilly townships
	d) Cities in plain
34	The average temperature of sewage in India, is
	a) 10 Deg. C.
	b) 15 Deg. C.
	✓ c) 20 Deg. C.
	d) 25 Deg. C.
35	Spirit varnish consists of
	a) Spirit and wax
	✓ b) Spirit and shellac
	c) Turpentine, spirit and wax
	d) Turpentine, spirit and shellac
36	Which of the following statement is correct?
	a) Stains used as paints have synthetic pigments
	b) Stucco paints contain polyvinyl acetate
	c) The solvent used in distempers is turpentine
	✓ d) All of the above
37	The commonly used cement in cement paints is
	✓ a) White cement
	b) Portland cement
	c) Alumina cement
	d) Rapid hardening cement
38	Seasoning of timber
	a) Increases the weight of the timber
	b) Improves strength properties of timber
	c) Does not give dimensional stability
	✓ d) All of the above
39	An assembled product made up of veneers and adhesives is called
	a) Board
	b) Plank
	✓ c) Plywood
	d) Batten
40	The durability of concrete is proportional to
	a) Sand content
	b) Water cement ratio
	✓ c) Cement-aggregate ratio
	d) Aggregate-water ratio
41	The workability of cement concrete can be improved by
	✓ a) Increasing the quantity of cement
	b) Increasing the proportion of coarse aggregate
	c) Increasing the quantity of sand
	d) All of the above

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42	For R.C.C. construction, the maximum size of coarse aggregate is limited to
	a) 10 mm
	b) 15 mm
✓	c) 20 mm
	d) 25 mm
43	Consolidation of concrete should proceed
	a) Before mixing
	b) Before placing
	c) Immediately after mixing
✓	d) Immediately after place
44	The specific surface (in sq cm/gm) of a good Portland cement should not be less than
	a) 500
	b) 1100
✓	c) 2250
	d) 3200
45	Vicat's apparatus is used to determine the
	a) Initial setting time of cement
	b) Final setting time of cement
	c) Normal consistency of cement
✓	d) All of the above
46	The rapid hardening Portland cement is obtained by
	a) Grinding the clinker to a high degree of fineness
	b) Adding calcium sulphate to the mixture
✓	c) Adding gypsum after grinding
	d) Burning the mixture at a lower temperate
47	The compound responsible for the initial setting of cement is
✓	a) Tri-calcium aluminate
	b) Tetra-calcium alumino ferrite
	c) Both (a) and (b)
	d) None of the above
48	Which of the following statement is correct?
✓	a) The fat lime swells two to three times of its original volume during slaking
	b) The poor lime is of pure white colour
	c) The feebly hydraulic lime slakes sluggishly
	d) All of the above
49	For one cubic metre of brick masonry, the number of bricks required are
	a) 400
	b) 450
✓	c) 500
	d) 550
50	Excess of alumina is the clay
	a) Makes the brick brittle and weak
	b) Makes the brick crack and warp on drying
	c) Changes colour of the brick from red to yellow
✓	d) Improves impermeability and durability of the brick
51	The standard B.O.D. of water is taken for
	a) 1 day
	b) 2 days
	c) 3 days
✓	d) 5 days

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52	If the grit in grit chamber is 4.5 Million Ltr / day, its cleaning is done
	a) Manually
	✓ b) Mechanically
	c) Hydraulically
	d) Electrically
53	The rate of accumulation of sludge per person per year
	a) 10 Liters
	b) 15 Liters
	c) 20 Liters
	✓ d) 25 Liters
54	The safe bearing capacity of the soil is equal to
	a) Nominal strength x Factor of safety
	✓ b) Ultimate tensile strength /Factor of safety
	c) Ultimate compressive strength/Factor of safety
	d) Ultimate bearing power/Factor of safety
55	Which of the following statement is wrong?
	a) A combined footing is so proportioned that the centre of gravity of the supporting area is in line with the centre of gravity of the two column loads
	✓ b) A combined rectangular footing is provided where loading condition is such that either the two columns are equally loaded or the interior column carries greater load
	c) A trapezoidal shaped footing is provided under any condition of loading
	d) None of the above
56	When heavy structural loads from columns are required to be transferred to a soil of low bearing capacity, the most economical foundation is
	a) Shallow foundation
	b) Deep foundation
	✓ c) Raft foundation
	d) Grillage
57	When two or more footings are connected by a beam, it is called
	a) beam footing
	b) combined footing
	✓ c) strap footing
	d) mat footing
58	The type of foundation most suitable for bridges is
	a) pier foundation
	b) raft foundation
	✓ c) pile foundation
	d) strap foundation
59	A type of cast-in-situ pile which has an enlarged base and a corrugated stem, is
	a) simplex pile
	b) Franki pile
	✓ c) Vibro-pile
	d) Raymond pile
60	The process of filling up all nail holes, cracks etc. with puttey is known as
	a) Knotting
	✓ b) Priming
	c) Stopping
	d) Finishing
61	The floor area includes the area of the balcony up to
	✓ a) 100%
	b) 75%
	c) 50%
	d) 25%

62	The pointing which is extensively used in brick work and stone masonry face work is
	a) Flush pointing
	✓ b) Struck pointing
	c) V-grooved pointing
	d) Tuck pointing
63	A block of stone or masonry provided under the end of tie beam to spread the load from the roof over a large area of bearing, is called
	✓ a) gable
	b) hip
	c) verge
	d) template
64	The window which projects outward from the walls of a room to secure an increased area of opening for admittance of light and ventilation, is called
	a) dormer window
	b) Corner window
	✓ c) Bay window
	d) Clearestorey window
65	Cement become useless if it adsorbs moisture more than
	a) 1%
	b) 2%
	c) 4%
	✓ d) 5%
66	Fineness Modulus of sand is 2.5 and it is graded as
	a) Fine sand
	b) Medium sand
	✓ c) Coarse sand
	d) Very coarse sand
67	In stairs, the flier is
	a) A vertical portion of a step providing a support to the tread
	b) A straight step having a parallel width of tread
	c) The under surface of a stair
	✓ d) The angle which the line of nosing of the stair makes with the horizontal
68	In constructing concrete partition wall, the concrete mixture usually adopted is
	a) M 100
	b) M 150
	✓ c) M 200
	d) M 250
69	A stone wall provided to protect the slopes of cutting in natural ground from the action of weather, is known as
	✓ a) Retaining wall
	b) Breast wall
	c) Parapet wall
	d) Buttress
70	The type of stone masonry commonly adopted in the construction of residential building is
	a) Uncoursed rubble masonry
	✓ b) Coursed rubble masonry
	c) Random rubble masonry
	d) Dry rubble masonry
71	The conception of idea for any construction work is the responsibility of
	a) Owner
	b) Engineer
	c) Contractor
	✓ d) Designer

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72	A golden rule for the procurement of construction stores is that
	a) Half of the construction stores should be at work site and half under procurement
	b) Two-third of the construction stores should be at work side and one-third under procurement
	c) Three-fourth of the construction stores should be at work site and one-fourth under procurement
	✓ d) Whole of the construction stores should be at work site
73	When used in connection with the progress of a work, the term amount indicates the
	✓ a) Total expenditure on a particular item
	b) Supplies made and services performed
	c) Value of the finished product in a manufacturing operation
	d) None of the above
74	Actual performance of a task is called
	a) An event
	✓ b) An activity
	c) A duration
	d) Any of the above
75	When float of an activity is negative
	a) It represents a situation where extra resources are available and the completion of project is not delayed
	✓ b) It represents that a programme falls behind schedule and additional resources are required to complete the project in time
	c) The activity is critical and any delay in its performance will delay the completion of whole project
	d) All of the above
76	The chart which gives an estimate about the amount of materials handling between various work stations is known as
	✓ a) Flow chart
	b) Process chart
	c) Travel chart
	d) Operation chart
77	The early finish time of an activity is the .... of early start time and duration of activity.
	✓ a) Sum
	b) Difference
	c) Product
	d) ratio
78	In a line organization
	a) responsibility of each individual is fixed
	b) discipline is strong
	c) quick decisions are taken
	✓ d) all of the above
79	Which of the following is not valid version of MS Office
	a) Office XP
	b) Office Vista
	c) Office 2007
	✓ d) Office 2000
80	You cannot close MS Word application by
	✓ a) Choosing File menu then Exit sub menu
	b) Press Alt + F4
	c) Click X button on title bar
	d) From File menu choose close menu

81	What is shortcut key for manual line break?		
		a)	Ctrl + Enter
		b)	Alt + Enter
	✓	c)	Shift + Enter
		d)	Space + Enter
82	Which feature helps you to insert the contents of clipboard as text without any formatting?		
	✓	a)	Paste special
		b)	Format Painter
		c)	Page setup
		d)	Styles
83	What is use of bookmarks in Microsoft Word?		
		a)	To easily correct the spelling errors
		b)	To quickly jump to a specific location in the document
		c)	To quickly jump to the ending of the document
	✓	d)	To create a link within the document
84	Where can you find the horizontal split bar on MS Word screen?		
		a)	On the left of horizontal scroll bar
	✓	b)	On the right of horizontal scroll bar
		c)	On the top of vertical scroll bar
		d)	On the bottom of vertical scroll bar
85	Tabs stop position can not be the following alignment		
		a)	Decimal alignment
	✓	b)	Centre alignment
		c)	Bar alignment
		d)	Justify alignment
86	How to use Format Painter multiple times?		
		a)	By click on Lock Format Painter Icon
	✓	b)	By double click on the Format Painter Icon
		c)	By selecting Edit -> Format Painter -> Multiple use
		d)	Format Painter cannot be used multiple times
87	Black cotton soil is unsuitable for foundations because its		
		a)	Bearing capacity is low
		b)	Permeability is uncertain
		c)	Particles are cohesive
	✓	d)	Property to undergo a volumetric change due to variation of moisture content
88	Galvanizing means covering iron with a thin coat of		
		a)	Tin
	✓	b)	Zinc
		c)	Glaze
		d)	Coal tar
89	Strength of cement concrete primarily depends upon		
		a)	Quality of water
		b)	Quantity of aggregate
		c)	Quantity of cement
	✓	d)	Water cement ratio
90	Soundness test of cement determines		
	✓	a)	Quality of free lime
		b)	Ultimate strength
		c)	Durability
		d)	Initial setting

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91	If P is the percentage of water required for normal consistency, water to be added for determination of initial setting time, is
	a) 0.70 P
	b) 0.75 P
	c) 0.80 P
	✓ d) 0.85 P
92	The average domestic consumption under normal conditions in an Indian city per day per person is,
	a) 105 liters
	b) 115 liters
	c) 125 liters
	✓ d) 135 liters
93	The ratio of maximum hourly consumption and average hourly consumption of the maximum day is
	✓ a) 2.7
	b) 1.5
	c) 1.8
	d) 2.4
94	The population of a city in 2000 is 50,000. The average increase in population over last 8 decades is 7500 and average incremental increase during 8 decades is 750. The population of the city based on incremental method, in the year 2020 will be
	a) 55,000
	b) 60,500
	c) 66,500
	✓ d) 72,500
95	For determining the velocity of flow of underground water, the most commonly used non-empiricial formula is
	✓ a) Darcy's formula
	b) Slichter's formula
	c) Hazens' formula
	d) Lacy's formula
96	The storage capacity of a reservoir may be divided into three zones. The lowest zone is
	✓ a) Dead storage
	b) Useful storage
	c) Surcharge storage
	d) None of these
97	Percussion drilling is unsuitable in
	✓ a) unconsolidated sand
	b) Unconsolidated gravel
	c) Quick sand
	d) Consolidated rocks
98	The depth of the water table at a place is 45 m below the general ground level. To left water from a deep tube well in such a locality, the type of pump to be installed is
	a) Centrifugal pump
	✓ b) Reciprocating pump
	c) Deep well turbine pump
	d) None of these
99	A reduced levels of the string at the consecutive sight rails A and B are 203.575 m, 203.475 m respectively. If the difference of their R. D.s is 10 m, the gradient of the sewer line is
	✓ a) 1 in 100 upward
	b) 1 in 500 upward
	c) 1 in 100 downward
	d) 1 in 503 upward