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C16-C-**407**

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BOARD DIPLOMA EXAMINATION, (C-16)
OCTOBER/NOVEMBER-2018
DCE-FOURTH SEMESTER EXAMINATION

CIVIL ENGINEERING DRAWING-II

Time : 3 Hours] [Total Marks: 60

PART-A

4X5=20

Instructions :

1. Answer **All** questions.
2. Each question carries **Four** marks.
3. Any missing data may be assumed suitably

1. Draw the cross-section of the pipe along with bedding and benching of pipe culvert with the following data:

Internal diameter of CC pipe	= 800 mm
External diameter of CC pipe	= 1000 mm
Bedding for the pipe	= 300 mm
Benching for the pipe	= 250 mm
Width of concrete bed	= 1600 mm
No. of pipes	= 1

2. Sketch the section of support of an RCC slab bridge showing bed block and abutment cross-section and the name the parts.
3. Draw the cross-section of an empty soak pit.

Internal diameter	= 900 mm
Circular using	= 230 mm thick brick lining with dry joints
Total depth of pit	= 1.70 mm
General ground level	= 450 mm below roof slab
Inlet pipe with bend	= 75 mm dia and kept at 250mm below G.L
Roof covering	= 70 mm thick removable precast concrete slab

4. Draw the section across the barrel of a tank sluice with the following data:

Vent way: Width 600mm internal
Height 900 mm internal

Side walls of barrel: Thickness at top 450mm
Thickness at bottom 600mm (the water face is vertical)

Foundation: CC bed 450 mm thick and 2400 mm wide
RCC roof slab barrel : 160 mm thick

5. Name the parts numbered 1 to 8 of the tank bund shown in Fig.1.

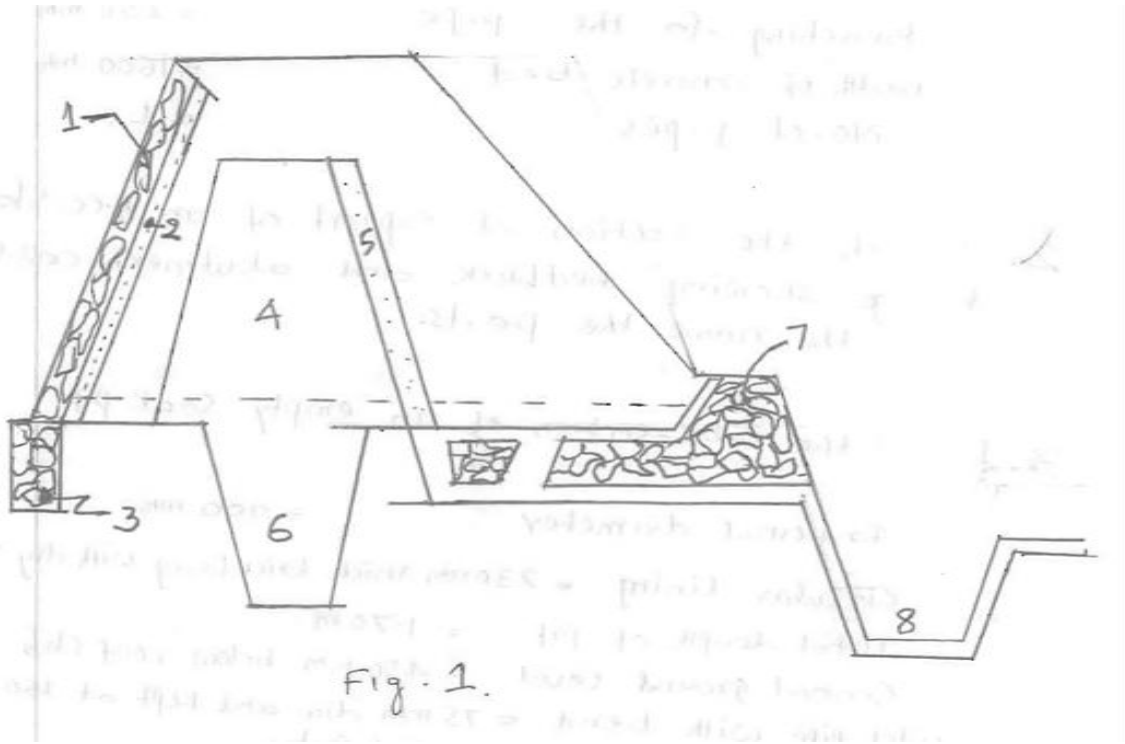

Fig. 1.

PART-B

20x2=40

Instructions :

1. Answer **ALL** questions.
2. Each question carries **TWENTY** marks.
3. Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer

6. Draw the sectional elevation of a square R.C.C over head tank with the following data to a scale of 1:50
Height of the Tank (From GL to bottom of tank i.e top of floor slab or base slab)=9.0m

Size of tank	= 4.5m x 4.5mx1.5m
Thickness of R.C.C side Walls	= 200mm
Thickness of R.C.C base slab	= 200mm
Thickness of R.C.C roof slab	= 120mm
Size of R.C.C column	= 400mmx400mm
No. of R.C.C column	= 4 (one at each corner)
Size of R.C.C brace beams	= 400mm x 350mm
Spacing of brace beams	=3.0 m c/c
Depth of R.C.C footing below ground level	=2.0m
Size of footing at base	=1.6 x 1.6m
Thickness of footing at column face	=500m
Thickness of footing at the end	=200mm
Thickness of leveling course below the footing	=200mm (1:4:8) plain concrete

Size of ring beam below base slab = 400mmx450mm

Dia of inflow pipe	= 100mm
Dia of outflow pipe	= 75mm
Dia of scour pipe	= 75mm
Size of manhole cover	= 600mm x 450mm
Size of overflow pipe	= 75mm

Show the pipe connections, ladder and ventilating arrangements.

7. Draw the longitudinal section of " Canal Drop" from the following data to a scale of 1:50

General Particulars

	U/S	D/S
Ground Level	+120.600	+120.600
Bed level	+120.000	+118.600
F.S.L	+120.500	+119.100
Canal bund level	+121.100	+121.100
Canal bed width	+1.60m	+1.30mm
Side slopes in cutting	1:1	1:1

Body Wall:

Top of body wall = 120.00

Bottom level C.C Foundation top level 118.60

C.C foundation bottom level 117.850

Top width = 600mm

Bottom width = 1200mm, u/s face vertical

Width of C.C foundation = 1800mm with equal offset.

Notch;

Thickness = 450mm

Top level of notch=C.B.L(Canal bund level) = +121.100

One No. of Stepped notch is provided at centre

C.C Apron on D/S:

Provide in continuation of C.C Bed of body wall with same thickness.

Length of C.C apron = 2.75m

Top level of C.C apron = +118.600

Bottom level of C.C apron = +117.850

Rough stone bed pitching on U/S with 300 mm size bowders to a thickness of 300mm and a length of 1.5m including toe wall of deapth of 600mm.

Rough stone bed pitching with 300 mm size boulder to a thick of 300 on D/S length of 3.5 including toe wall of deapth of 600mm.

Revetment U/S is provided to the sides of canal from bed level To F.S.L for a length of 2.8m. A slope of 1;1 is given at the end of revetment of connect it with bed level.

Revetment D/S the revetment starts from canal bund level at notch wall and is taken to a level of +120.50 at the end of CC apron in an incline direction from the end of CC apron, the revetment is continued at the same level up to end of rough stone pitching and vertically dropped of +119.500. From this point revetment is continued at the same level for a distance of 3.0m A slope of 1: 1 is given at the end of revetment to connect it with bed level. Rough stone bowders of size 300mm are used for revetment of canal slopes

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