(2013-14)

ANJUMAN-I-ISLAM'S
KALSEKAR TECHNICAL CAMPUS, NEW PANVEL
School of Engineering & Technology

Subject: BMC	Marks: 20
Date: --/09/13	Duration: 1 hr
Class: SYCE (SEM III)	Branch: Civil Engg.

Test -II

Q1. Attempt any five   (2*5=10)M

   (a) Define plastering

   (b) Define seasoning of timber.

   (c) What is glass? Explain its types.

   (d) Define bond in masonry.

   (e) Write short note on requirements of good stone.

   (f) Define various types of acoustic defects.

Q2.   5M

   (a) Explain various types of paints with their use.

                              OR

   (b) Explain defects in timber.

Q3.   5M

   (a) Compare natural seasoning and kiln seasoning.

                              OR

   (b) Write short note on air conditioning.

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Subject: **Engineering Geology**	Date : /10/13
Marks: 20	Duration: 1 Hr.
Class: SE (III)	Branch: S.E. Civil

Test -II

Instructions: 1. Question No. 1 is **compulsory**
2. Draw neat diagrams wherever necessary.
3. Figures to the **right** indicate marks

1. Attempt any five of the following-   (5x2=10)
    (a) Write the identifying physical properties and use of Gypsum.
    (b) Draw a neat diagram showing different parts of a fold.
    (c) What is an aquifer?
    (d) Differentiate between isoclinals and recumbent fold.
    (e) What are Influent and effluent stream?
    (f) Differentiate between Dip and Strike.

(2)   Write short notes on-   (5)
    (a) various types of unconformities
                    or
    (b) Different types of metamorphism

3)   (a) Describe the various types of faults.
                    or
    (b) State the parent rock for the following —   (5)
       Metamorphic Rock
       Phyllite
       Quartzite
       Marble
       Gneiss
       Slate

Subject: Fluid Mechanics-I

Marks: 20

Date: Oct-13   **TEST-II**   Duration: 01 Hr

Class: S.E   (SEM-III)   Branch: Civil Engg.

Instruction: 1) Question No. 1 is compulsory

Q.1 Attempt any five   **(10 Marks)**

a) Describe Lagrangian and Eulerian Approach
b) What is stream line and path line
c) Enlist different types of fluid flows
d) What is venacontracta? And write its significance
e) Write the difference between large and small orifice
f) What is difference between Notch and Weir

Attempt any one of the following

Q.2 a) Derive Bernoullis equation from Euler's basic equation   (5 Marks)

Q.2 b) Horizontal venturi meter with inlet and throat diameter 40 and 20 cm respectively is used to measure the flow of water. The reading of differential manometer connected to inlet and throat is 10 cm of mercury. Determine the rate of flow.   (5 Marks)

Attempt any one the following

Q. 3 a) $V = 4x^3i - 6x^2yj + 3tk$. Find the velocity and acceleration of a fluid particle at (2, 1, 4) at time t=1.

(5 Marks)

Q.3 (b) A jet of water, issuing from a sharp edged vertical orifice under a constant head of 8 cm, at a certain point, has the horizontal and vertical co-ordinates measured from the vena-contracta as 20 cm and 10.5 cm respectively. Find the value of Cv and Cc if Cd=0.60   (5 Marks)

(2013-14)

Subject: **Strength of Materials**	Date: Oct. 13
Marks: **20**	Duration: **01Hr/s**
Class: **SE** (TII) Test: **II**	Branch: **Civil**

Instructions:

   1) Question No. **1** is **Compulsory**

   2) Attempt any **One** question out of remaining **Two** Questions

   3) Assume any data if **required** & state them **clearly**.

Q.1) Attempt any two of the following.   (5X 2=10)

   a) State the assumptions made in the theory of pure bending.

   b) State the assumptions made in the Eulers theory.

   c) Derive the equation $q = s\, a\, \bar{y} / I\, b$.

Q.2) Attempt any one of the folowing   (10x1=10)

   a) A horizontal beam of the section shown in **Fig. 1** is 3 m long & simply supported at the ends. Find the maximum udl it can carry if the compressive & tensile stresses must noy exceed 55 N/mm2 & 30 N/mm2 respectively. Draw the variation of stress over the mid span of the beam.

   b) The T- shaped cross-section of a beam is shown in **Fig. 2,** is subjected to vertical shear force of 100 kN. Draw the shear stress distribution diagram. Take I_{NA} = 1.134 x 10^8 mm4.

Q.3) Attempt any one of the following   (10x1=10)

   a) Calculate the resultant stresses at the corners for an R.C.C. footing shown in **Fig. 3**

   b) A hollow C.I. Column of external diameter 250 mm & internal diameter 200mm is 10 m long with both ends fixed. Find safe axial load with a FOS = 4. Take f_c = 550 N/mm2 & a = 1/1600.
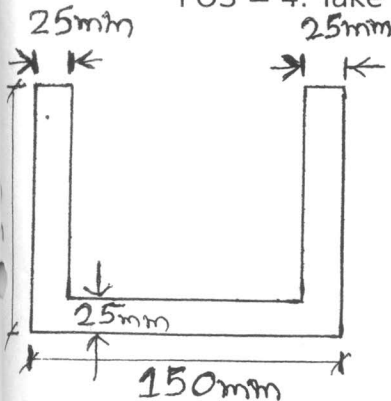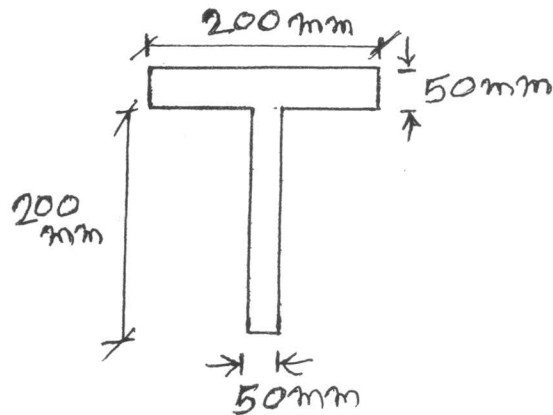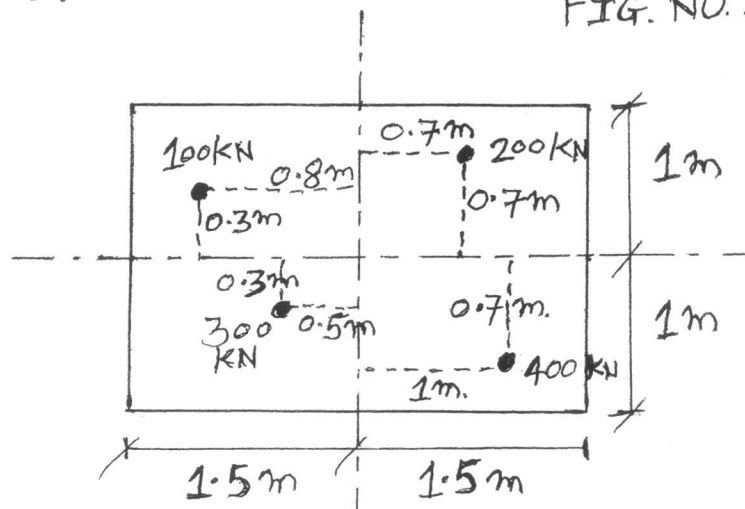

FIG. NO.-1.

FIG. NO.2.

FIG. NO.-3

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School of Engineering & Technology

Subject: Surveying-1   Marks: 20
Date: 21/10/13   Duration: 1 hr (12pm to 1pm)
Class : SYCE   (SEM III)   Branch : Civil Engg.

UNIT TEST: 2

N.B.   (1) Q No. **1 is Compulsory**   (2) Attempt **any one** question from **Q No. 2 & 3**

Q1. Answer the following (**ANY 5**):   **10M**

(a) Differentiate between Rise and Fall and HI methods.

(b) If R.L of bench mark is 200.000 m, back sight is 1.525 m and foresight is 3.285 m, R.L of the forward station is .....

(c) Define Level Surface, Line of Collimation.

(d) The area of a figure drawn to a scale of 10m to 1 cm was measured by a planimeter with the anchor point inside. The tracing arm being set to the natural scale. The initial and final reading were 6.582 and 4.698 respectively. The zero of the dial passed the fixed index mark once in the reverse direction. Calculate the area of the figure given that C=20

(e) Explain radiation method of plane table survey.

(f) What do you understand by interpolation of contours?

Q2. Solve (**ANY 1**)   **5M**

(a) The following perpendicular offsets were taken at 10m intervals from a survey line AB to an irregular boundary line, 2.30, 3.80, 4.55, 6.75, 5.25, 7.30, 8.95, 8.25 and 5.50 metres. Calculate the area in square metres enclosed between the survey line, the irregular boundary, the first and the last offsets by the application of Simpson's rule.

(b) The following consecutive readings were taken with a dumpy level and a 4m staff on a continuously sloping ground on a straight line at a common interval of 30m.

0.680, 1.455, 1.855, 2.330, 2.885, 3.380, 1.055, 1.860, 2.265, 3.540, 0.835, 0.945, 1.530 and 2.445.

The R.L of the first point was 80.750 m. Rule out a page of a level field book and enter the above readings. Calculate the R.Ls of the points.

Q3. Answer in brief   **5M**

(a) Explain with sketch the properties of contours.

(b) Write a descriptive note on 'Profile Leveling'

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Test -II

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   (b) Explain defects in timber.

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   (a) Compare natural seasoning and kiln seasoning.

                    OR

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(2013-14)

Subject: Applied Maths-III
Date: 21-10-'13
Class: S.E
Semester: III

Marks: 20
Duration: 1 Hr
Branch: CE/ME
Test: ~~First~~ II

I.   Attempt any two questions: (2x4=8)

1. Find the bilinear transformation which maps the points z=0,i,-1 onto w= i,1,0.

2. Evaluate $\int_c \frac{dz}{z^3(z+4)}$, where c is the circle $|z| = 2$

3. Find Fourier series expansion of $f(x) = x^2$ in $[0,2\pi]$

4. Evaluate $\oint \frac{3z^2 +z}{z^2 -1} \, dz$ over the curve C: $|z| = 2$

II.   Attempt any two questions: (2x6=12)

1. Evaluate $\int_0^{2\pi} \frac{d\theta}{5+3sin\theta}$

2. Find the image of the circle $|z| = |z-1| = 1$ under the transformation $w = z^2$

3. Find Laurent's series which represents the function $f(z) = \frac{2}{(z-1)(z-2)}$ when (i) $|z| < 1$ (ii) $1< |z| < 2$