Q.P. Code : 3695

(OLD COURSE)

(3 Hours)   **[Total Marks : 100**
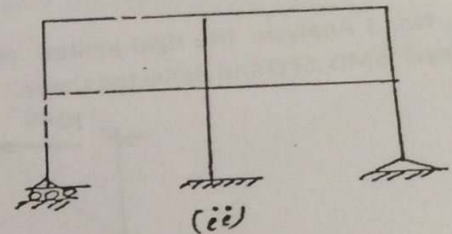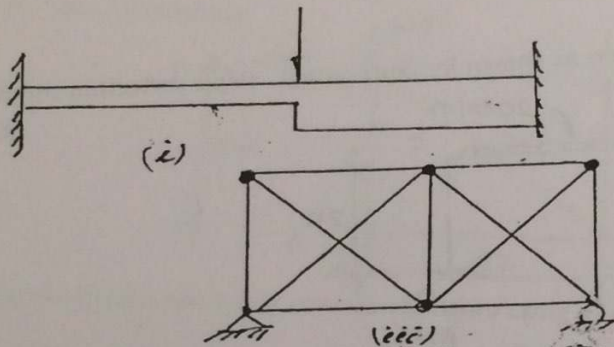
N. B.   1 Question No. 1 is compulsory

2 Attempt any Four questions from remaining questions.

3 Assume any **suitable** data wherever **required** but justify the same
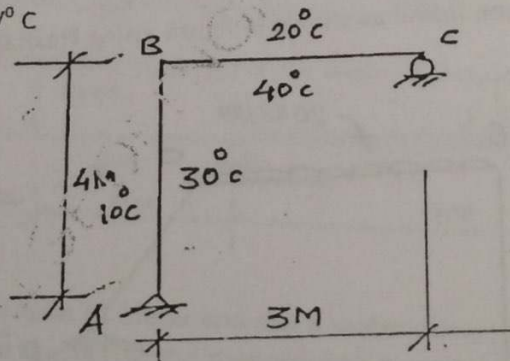
(06)

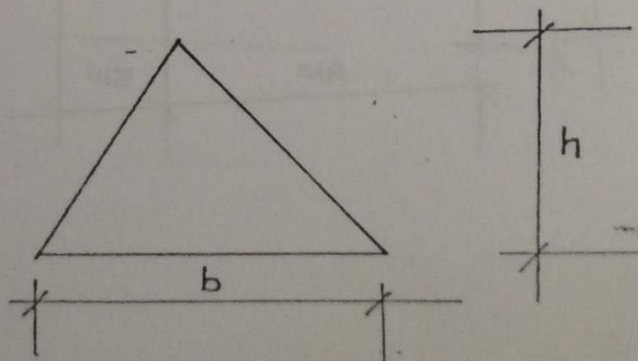Q. No. 1 (a) for the structures shown in Figures, calculate ——

I) Static indeterminacy,

2) Kinematic indeterminacy (neglecting axial deformations for flexural members)

(i)

(ii)

(iii)

Q. No. 1 (b) Determine the horizontal displacement of joint D of the rigid jointed plane frame as shown in figure, due to change of temperature of member surfaces. Consider depth of all the members as 500mm. Take $\alpha_t = 12 \times 10^{-6} / ^\circ C$ (10)
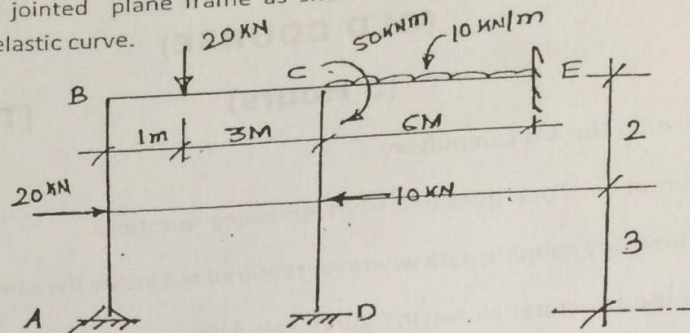

Q. No. 1 (c) Determine the shape factor for the triangular section as shown in figure   (04)

Q. No. 2 a) Analysis the rigid jointed plane frame as shown in figure ,using moment distribution Method. Draw BMD, SFD and elastic curve.   (16)

b) Define the following term :-   (04)

i) Carryover Factor

ii) Distribution Factor

Q. No. 3 Analysis the rigid jointed plane frame as shown in figure using slope deflection method .Draw BMD ,SFD and deflected shape.   (20)
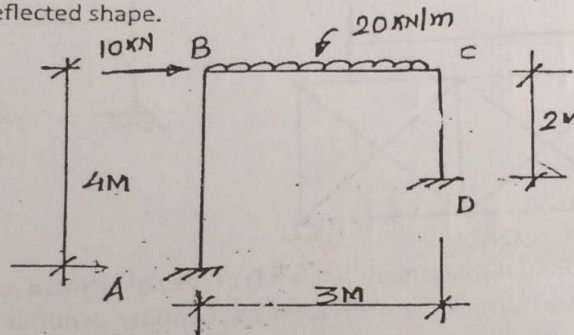
Q. No. 4 Analysis the rigid jointed plane frame as shown in figure ,using Flexibility Method .Draw BMD ,SFD and deflected shape.   (20)
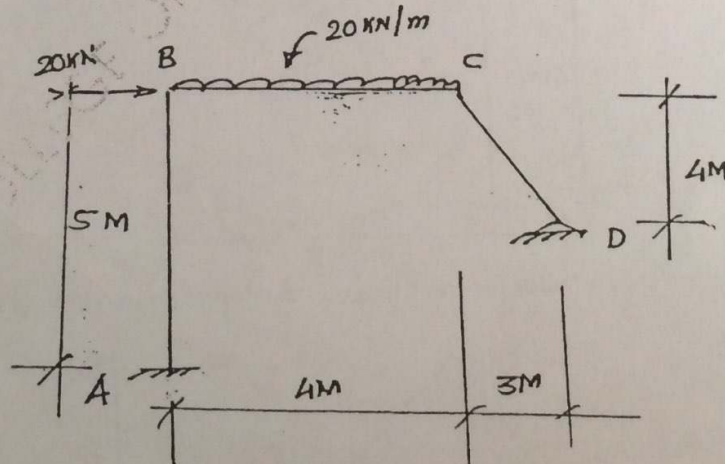

[TURN OVER

RJ-Con. 8613-15.

Q. No. 5 Analysis the rigid jointed plane frame as shown in figure ,using Stiffness Method .Draw BMD ,SFD and deflected shape.   (20)

Q. No. 6   a) Analysis the pin jointed plane frame shown in figure and calculate the forces in all members. Take AE constant.   (10)

b) Analyze the Continuous beam as shown in figure using Method of least work and draw BMD. (10)

Q. No. 7 a) Determine the plastic moment capacity for the beam as shown in Fig.   (12)
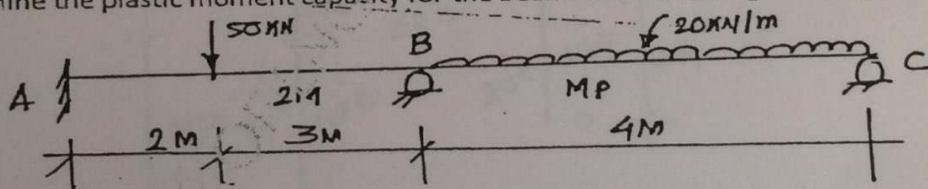
b) A two hinged parabolic arch of span 20 meter and rise 4 meter carries uniformly distributed load of 40 kN/m on right half span find the reaction at the supports and deaw BMD   (08)

_____

RJ-Con. 8613-15.

(REVISE COURSE)   **QP Code : 3239**

(3 Hours)   (Total Marks: 80)

N. B.   1   Question No. **1 is compulsory**

2   Attempt any three questions from remaining questions.

3   Assume any **suitable** data wherever **required** but justify the **same**

Q. No. 1 (a) for the structures shown in Figures, calculate ------   (06)

1) Static indeterminacy,

2) Kinematic indeterminacy (neglecting axial deformations for flexural members)
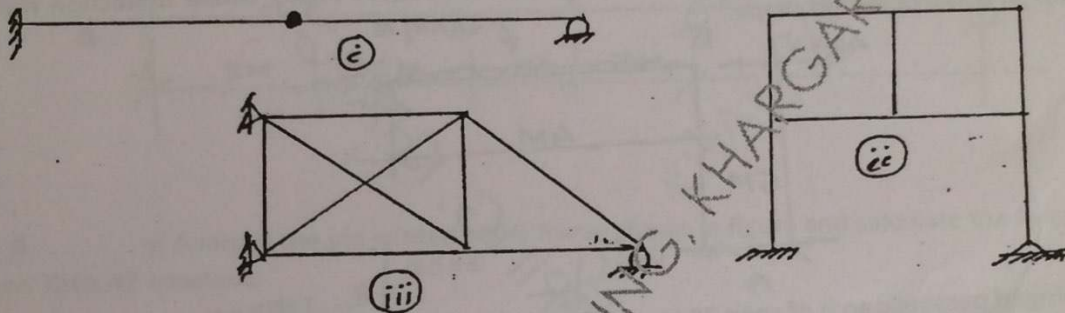
Q. No. 1 (b) Determine the horizontal displacement of joint D of the rigid jointed plane frame as shown in figure, due to change of temperature of member surfaces. Consider depth of all the members as 500mm. Take $\alpha_t = 12 \times 10^{-6} /^\circ C$ (10)
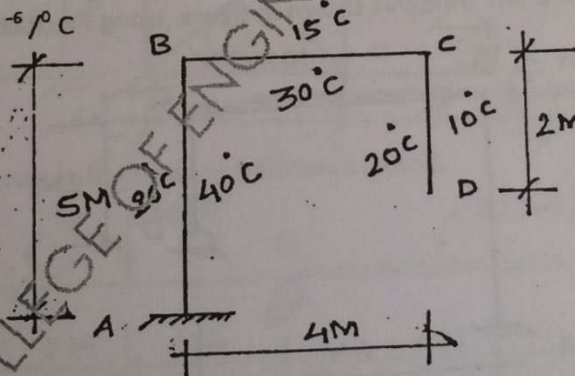
Q. No. 1 (c) Determine the shape factor for the triangular section as shown in figure   (04)
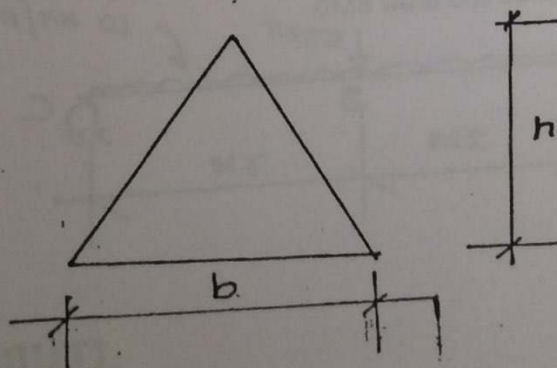
[**TURN OVER**

JP-Con. 8630-15.

Q. No. 2 a) Analysis the rigid jointed plane frame as shown in figure, using moment distribution
Method. Draw BMD, SFD and elastic curve.   (10)
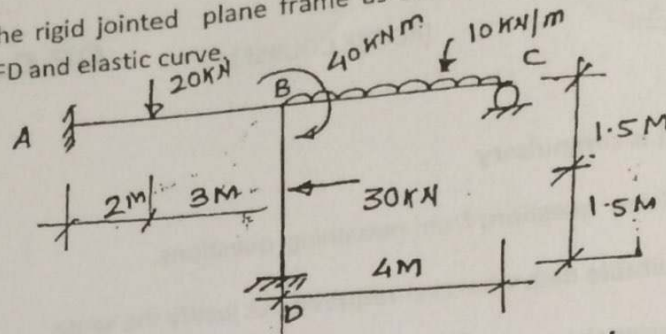
b) Analyse the beam by three moment theorem and draw BMD   (10)
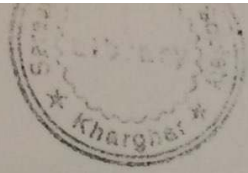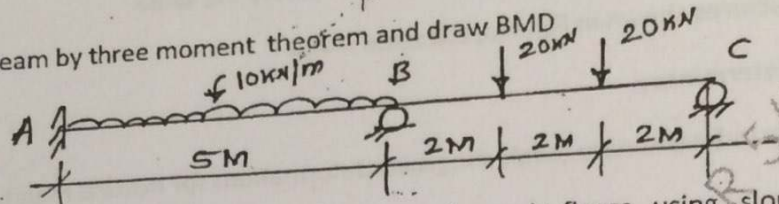

Q. No. 3 Analysis the rigid jointed plane frame as shown in figure, using slope deflection method
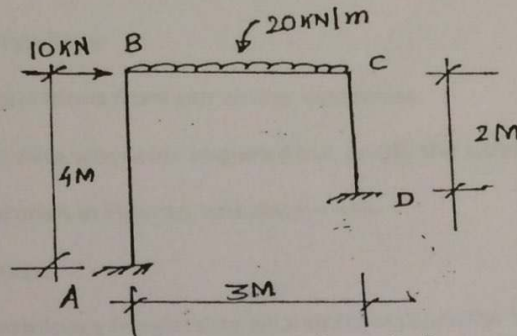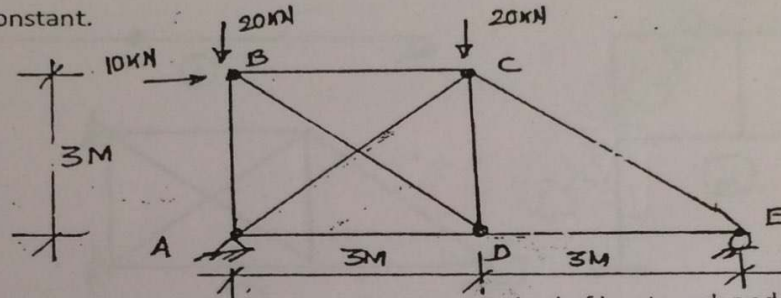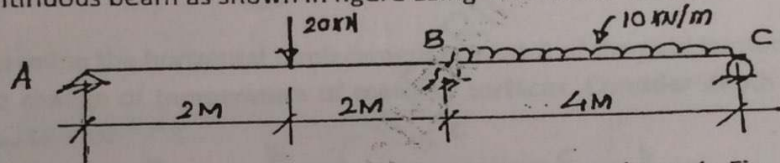.Draw BMD ,SFD and deflected shape.   (12)
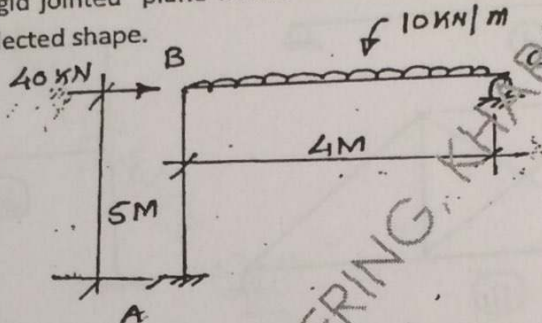
b) A two hinged parabolic arch of span 20 meter and rise 4 meter carries uniformly distributed load of
40 kN/m on right half span find the reaction at the supports and deaw BMD   (08)

Q. No. 4 Analysis the rigid jointed plane frame as shown in figure ,using Flexibility Method .Draw BMD
,SFD and deflected shape.   (12)
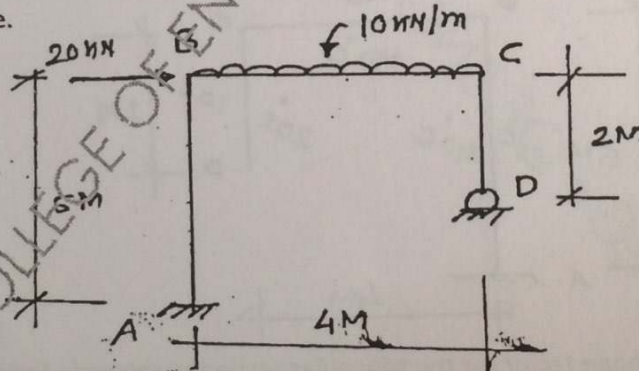
b) Analysis the beam by flexibility method and draw BMD   (08)
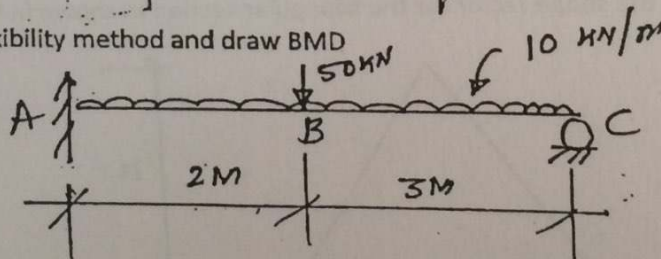
JP-Con. 8630-15.   [TURN OVER

Q. No. 5 Analysis the rigid jointed plane frame as shown in figure ,using Stiffness Method .Draw BMD ,SFD and deflected shape.   (12)
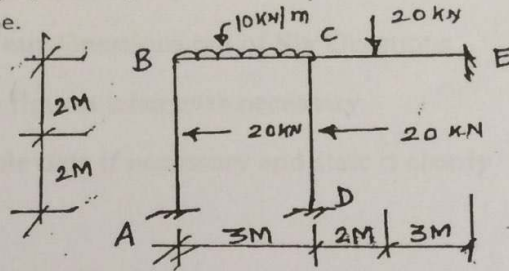
b)   Calculate the plastic moment capacity required for the continuous beam with working load as shown in figure.   (08)
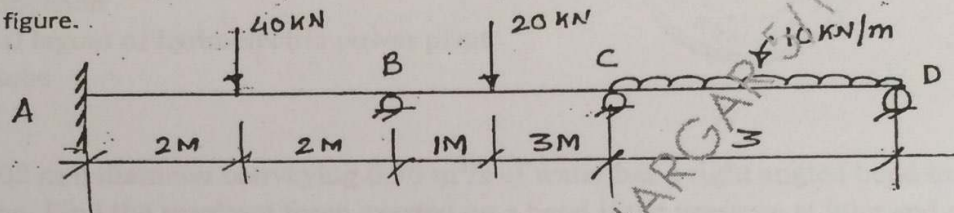

Q. No. 6   a) Analysis the pin jointed plane frame shown in figure and calculate the forces in all members. Take AE constant.   (12)
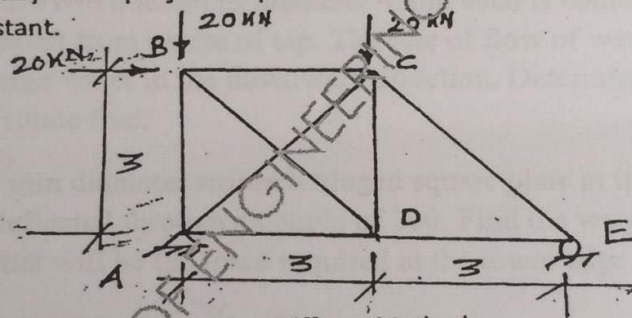
b) Analyze the beam as shown in figure using Stiffness Method.   (08)
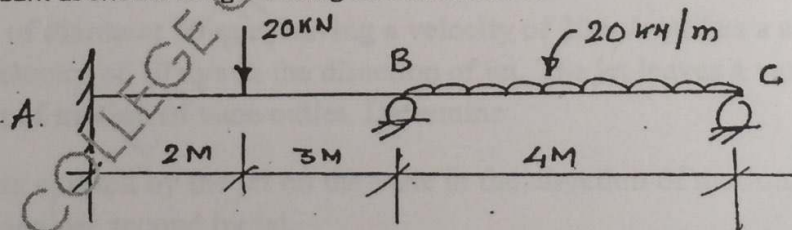
JP-Con. 8630-15.

(OLD COURSE)

QP Code : 3699

(Three Hours)

100 Marks

N.B. (i) Question **No. 1** is compulsory

(ii) Attempt any **Four** Questions out of **Six** Questions

(iii) Illustrate with figures whenever necessary

(iv) Assume suitable data if necessary and state it clearly

1 Write a short note on   [20]

   a. Dimensional homogeneity
   b. Jet propulsion
   c. General layout of hydroelectric power plant
   d. Draft tube
   e. NPSH
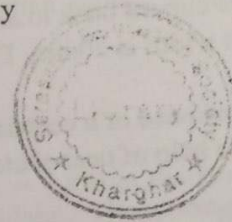
2 (a) A pipe 300 mm diameter conveying 0.30 m^3/s of water has a right angled bend in a horizontal plane. Find the resultant force exerted on a bend if the pressure at inlet and outlet of bend are 24.525 N/cm^2 and 23.544 N/cm^2 [10]

2 (b) A lawn sprinkler with two nozzles of diameter 4 mm each is connected across a tap of water 20 cm and 30 cm apart from centre of tap. The rate of flow of water through tap is 120 cm^3/s. The nozzle discharge water in the downward direction. Determine the angular speed at which the sprinkler will rotate free.   [10]

3(a) A jet of water of 30 mm diameter strikes a hinged square plate at it's centre with a velocity of 20 m/s . The plate is deflected through an angle of 200. Find the weight of plate. If the plate is not allowed, to swing, what will be the force required at the lower edge of the plate to keep plate in vertical position.   [10]

3(b) A jet of water of diameter 50 mm, having a velocity of 20 m/s strikes a curved vane which is moving with a velocity of 10 m/s in the direction of jet. The jet leaves a vane at an angle of 600 to the direction of motion of vane outlet. Determine:

   i)   The force exerted by the jet on the vane in the direction of motion   [10]
   ii)   Work done per second by jet   [10]

4 (a) A pelton wheel is to be designed for the following specifications:

Shaft power = 11772 kW; Head = 380 metres; speed= 750 rpm; Overall efficiency = 86%; Jet diameter is not to exceed one-sixth of the wheel diameter. Determine:

   (i)   The wheel diameter (ii) The number of jets required, and (iii) Diameter of jet
          Take K_{v1}= 0.985 and K_{u1} = 0.45

[TURN OVER

RJ-Con. : 9572-15.

(3 Hours) [Total Marks 80]

N.B (1) Question no. 1 is compulsory
(2) Attempt any **Three** questions from remaining 5 questions.
(3) Assume any **suitable** data if **necessary** and state it very **clearly**.

Q1 Solve any Four 20
a Define Moment of Momentum Equation.
b Explain different types of similarities that must exist between prototype and model
c If a centrifugal pump does not deliver any water when started, what may be the probable cause and how can they be remedied.
d Write a short note on Hydraulic Accumulator.
e What is Cavitation in Pump.
f What are the Merits and limitations of distorted models.

Q2 a A pipeline 60 cm diameter, conveying oil (sp. Gr. = 0.85) at the flow rate of 1800 lit/sec has a 90^0 bend in the horizontal plane. The pressure at the entrance to the bend is 1.5 kg/cm^2 and the loss of head in the bend is 2.0 m of oil. Find the magnitude and direction of the force exerted by the oil on the bend and show the direction of the force on a sketch of the bend. 10

b Water is admitted at the axis of rotation of a four arm lawn sprinkler. The nozzle has a diameter of 6 mm. Sprinkler arms have a distance of 28 cm. For a flow of 1.2 lit/sec. find speed of rotation and torque to keep the sprinkler stationary. Neglect friction. 10

Q3 a The performance of a spillway of a power project is to be studied by means of a model constructed to a scale of 1:9. Neglecting the viscous and surface tension effects, determine: 10
(i) Rate of flow in the model for a prototype discharge of 1000 cumec.
(ii) The dissipation of energy in the prototype hydraulic jump, if the jump in the model studies dissipates 294.2 watts (0.4 metric horse power)

b A jet propelled boat, moving with a velocity of 5.5 m/s, draws water amid-ship. The water is discharged through two jets provided at the back of the ship. The diameter of each jet is 155 mm. The total resistance offered to the motion of the boat is 4905 N. Determine: 10
(a) Volume of water drawn by the pump per second, and
(b) Efficiency of the jet propulsion.

Q4 a A jet of water having a velocity of 22 m/s strikes a curved vane , which is moving with a velocity of 11 m/s. The jet makes an angle of 21^0 with the direction of motion of vane at the inlet and leaves at an angle of 130^0 to the direction of motion of vane at an outlet. Calculate: 10
(i) Vane angles so that the water enters and leaves the vane without shock.
(ii) Work done per second per unit weight of water striking the vane per second.

(P.T.O.)

JP-Con. 9658-15.

b   The following data were obtained from a test on a pelton wheel: 10
   (a) Head at the base of the nozzle = 32 m
   (b) Discharge of the nozzle = 0.18 cumec.
   (c) Area of the jet = 7500 sq.mm.
   (d) Power available at the shaft = 44 Kw.
   (e) Mechanical efficiency = 94%.
Calculate the power lost (i) in the nozzle; (ii) in the runner; (iii) in the mechanical friction.

Q5 a   An inward flow reaction turbine operating under 30 m head, develops 4000   10
kW while running at 300 r.p.m. The overall efficiency of the turbine is 0.85; the hydraulic efficiency is 0.9; and the radial velocity of flow at inlet is 7 m/s; the inlet guide vane angle at full gate opening is 30^0. Calculate the diameter and width of the runner at inlet. Blade thickness coefficient is 5%.

b   The propeller reaction turbine of runner diameter 4.5 m is running at 48 r.p.m.   10
The guide blade angle at inlet is 145^0 and the runner blade angle at the outlet is 25^0 to the direction of vane. The axial flow area of water through the runner is 30 m^2. If the runner blade angle at inlet is radial, determine:
   (i)   Hydraulic efficiency of the turbine,
   (ii)   Discharge through the turbine, and
   (iii) Power developed by the runner.

Q6 a   A three stage centrifugal pump has impeller 400 min in diameter and 20 mm   10
wide. The vane angle at outlet is 45^0 and the area occupied by the thickness of the vanes may be assumed 8 % of the total area. if the pump delivers 3.6 m^3 of water per minute when running at 920 r.p.m. determine:
   (i)   Power of the pump,
   (ii)   Manometrichead,and
   (iii) Specific speed.
Assume mechanical efficiency as 88% and manometric efficiency as 77%.

b   A conical draft tube having inlet and outlet diameters 1 m and 1.5 m   10
discharges water at outlet with a velocity of 2.5 m/s. The total length of the draft tube is 6 m and 1.3 m of the length of draft tube is immersed in water. If the atmospheric pressure head is 10.3 meters of water and loss of head due to friction in the draft tube is equal to 0.2 x velocity head at outlet of the tube, find Pressure head at inlet and efficiency of the draft tube

JP-Con. 9658-15.

Civil

Sub:- TRE-I   Date..25-5-15

(OLD COURSE)   QP Code : 3701

Con.

(3 Hours)   [Total Marks : 100

Note: i. Q. No. 1 is compulsory
         ii. Attempt **any 4 out of remaining 3**
         iii. Support all **theory and numerical with neat sketch**

1. A. Draw Layout of marshaling yard with its entire component and explain purpose of each   (08 M)
        component.   (12 M)
    B. Solve the following.
        i. Explain working of semaphore signals.
        ii. Explain Airport obstruction.

2. A. Enlist all fixtures and fastenings required for a B.G yard using wooden sleeper. Also calculate   (08 M)
        number of rails, sleepers and all the fixtures and fastenings required for 1km B.G track with
        Wooden sleeper and having sleeper density as M+10.   (06 M)
    B. Write note on Types of rail joints.   (06 M)
    C. Explain the role of transportation in development of a nation.

3. A. If the basic runway length for an airport situated at elevation of 100 meter is 1000 meter, find the   (08 M)
        actual runway length required if mean of average daily temperature and mean of maximum daily
        temperature is obtained as 38°c and 47°c respectively. Assume the runway to be horizontal
    B. Explain American method for laying of tracks.   (06 M)
    C. What are various visual aids? Explain their role in safety and efficiency of airport.   (06 M)

4. A. What would be the permissible speed on curve if on a 50° B.G track, average speed of trains is 70   (08 M)
        kmph and allowable cant deficiency is half that of maximum cant deficiency.   (06 M)
    B. Enlist and Explain purpose of various elements of an airport.   (06 M)
    C. Explain uniformity of gauge. What are its advantages?

5. A. Write step wise procedure to draw wind rose diagram type I and II.   (08 M)
    B. Explain instrumental landing system.   (06 M)
    C. Explain various theories of creep.   (06 M)

6. A. Calculate all the elements of a turnout on B.G track if N=12, d=13.3 cm and angle of switch is 1° 8′   (08 M)
        0″. Assume any other data if required.
    B. Interlocking of signal and points.   (06 M)
    C. Explain special breakwaters.   (06 M)

7. Write short note on any 4.   (20 M)
    A. Wooden sleepers.
    B. Dry docks.
    C. Different rail failures.
    D. Turning radius of an aircraft.
    E. Types of Harbour as per their purpose.

RJ-Con. 10365-15.
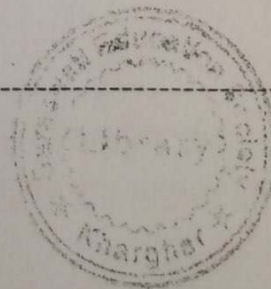
3 Hours   Total marks :80
Q 1 is compulsory. Answer **any three out of** the **remaining** questions.
Neat, labeled sketches, legible handwriting & practical examples will be appreciated.

Q.1   (20)

    a   Define gauge. What are its types ? Give suitable examples in India.
    b   Draw a neat labeled sketch of an artificial harbour. Give one example in India.
    c   List out the surveys to be carried for selecting a site for an airport.
    d   Draw and explain wind rose diagram type –I.
    e   Explain with sketch coning of wheels and tilting of rails.

Q.2   (20)

    a   Calculate all the necessary elements required to set out a 1 in 8.5 turnout, taking   10
off from a straight BG track with its curve starting from the toe of switch i.e.
tangential to the gauge face of the outer main rail and passes through theoretical
nose of crossing. Take heel divergence(d) as 11.4 cms.

    b   What do you mean by creep of rails. Explain various theories of creeps. What can   10
be done to arrest creep?

Q.3   (20)

    a   A 5° curve diverges out of a 2° main curve in opposite direction of a BG track. If   08
speed is limited to 30kmph on main line and permissible cant deficiency is 5.1
cms, what would be the speed limit on branch line?

    b   Explain Marshalling yard along with its types. Draw a neat labelled sketch   07
showing a typical marshalling yard.

    c   Explain point and crossing with a neat labeled sketch.   05

Q.4   (20)

    a   The length of a runway under standard conditions is 1750m. The airport reference   08
temperature is 32°C and has an elevation of 400m. The runway is to be
constructed with an equivalent gradient of 0.20%. Determine the corrected length
of the runway.

    b   Explain holding apron, taxiway and hanger with neat sketches.   07
    c   Draw a neat labelled sketch of a right hand turnout   05

Q.5   (20)

    a   Write a note on Airport markings.   08
    b   Explain Instrumental landing system with a neat sketch.   07
    c   State the functions of ballast.   05

Q.6   (20)

    a   A taxiway is to be designed to accommodate an aircraft with following   08
characteristics. Determine the turning radius for which the taxiway should be
designed. Wheel base = 17.6 m, Turning speed = 38 knph, coefficient of friction =
0.13, Tread of main gear = 6.6 m.

    b   Write notes on : (**Any three**)   12
       1) Breakwater.   2) Semaphore Signal   3) Jetty and wharf   4) Diamond crossing

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QP Code : 3705

(OLD COURSE)

(3 Hours)   [Total Marks : 100

N. B. : (1) Question No: 1 is compulsory.
        (2) Attempt any **four** questions out of remaining **six** questions.
        (3) **Figures** to the **right** indicates **full marks**.

1. Write short notes on any **four** of the following:–   20
    (a) Entrepreneurial skills
    (b) Project classification
    (c) Systems of book keeping
    (d) SWOT Analysis
    (e) Project lifecycle

2. (a) Define entrepreneur and entrepreneurship. What is the role played by   10
         entrepreneurs in the economic development of India.
    (b) Explain the step-wise procedure to be involved in starting a small scale   10
         industry.

3. (a) Describe the contributions made by F.W. Taylor towards Management.   10
    (b) Explain the various sources of and types of finances that are available   10
         to start an industry.

4. (a) Define present value and future value of a single amount   10
         (i) if you deposit Rs 5000 today in a bank which pays 15% interest
              compounded annually, how much will the deposit give after 6 and
              14 years?
         (ii) If you expect to receive Rs 3500 anually for four years, each
              receipt occuring at the end of the year, what is present value of
              the stream of benefits if the discount rate is 9%.
    (b) How will you classify entrepreneurs? Enlist the classification and   10
         enumerate the details.

5. (a) What do you mean by 'creation of a dream'? Illustrate the contents of   10
         a typical dream of an individual whose dream created a shift in the
         entrepreneurial culture.
    (b) What is organization? Explain along with merits and demerits of the
         following :
         (i) Line organization
         (ii) Matrix organization   [TURN OVER

(3 Hours)

Note: (1) Question No. **1** is **compulsory**.

(2) Attempt any **three** out of remaining **five** questions.

(3) Assume **suitable** data wherever necessary.

(4) **Numbers** to the **right** indicate **full** marks.

1. (a) What is geotechnical engineering? Explain the scope of soil engineering. 5

(b) Explain the Mohr-Coulomb theory for shearing strength of soils and its modifications by Terzaghi. 5

(c) What are the factors that influence permeability of soils? 5

(d) Differentiate compaction and consolidation? 5

2. (a) With soil mass idealization as three phase diagram and usual notations, derive from first principles that $S = \dfrac{w}{\frac{\gamma_w}{\gamma}(1+w) - \frac{1}{G}}$ 5

(b) A natural soil sample has a bulk density of 2 g/cm³ with 6 % water content. Calculate the amount of water required to be added to one cubic metre of soil to raise the water content to 15% while the void ratio remains constant. What is then the degree of saturation? Consider G = 2.67. 10

(c) What are the factors affecting compaction of soil. 5

3. (a) Classify the following soil as per IS classification system systematically with justifications.

% passing 75 microns sieve = 8 %; retained on 4.75 mm sieve = 35; coefficient of curvature = 2.5; uniformity coefficient = 7, liquid limit = 15; plasticity index = 3. 5

(b) A sample of soil for a constant head permeability test gives the following data: Diameter of permeameter = 76 mm; length of soil sample = 200 mm; head causing flow = 150 mm; quantity of water collected in 10 minutes = 150 ml; G = 2.65; Saturated unit weight of soil = 20 kN/m³. Determine (a) coefficient of permeability of soil in cm /s (b) superficial velocity of flow (c) seepage velocity. 10

(c) What are the uses of consistency limits 5

4. (a) Practically, under what circumstances quick sand conditions are developed. What is the critical hydraulic gradient for the quick sand condition in a soil deposit having porosity = 33 % and G = 2.60. 5

(b) The water table in a deposit of uniform sand is located at 2 m below the ground surface. Assuming the soil above the water table is dry, determine the effective stress at a depth of 5 m below the ground surface. The void ratio is 0.75 and the specific gravity of solids is 2.65. If the soil above water table is saturated by capillary action, what is the effective stress at that depth? 10

(c) What is flow net? What are the characteristics of flow net? 5

Civil

Sub:- GE-I
(OLD COURSE)   QP Code : 3710

10/06/15

(3 Hours)   [Total Marks : 100]

N. B.:
(1) Question No. 1 is compulsory.

(2) Attempt any four from remaining six questions.

(3) Figures to the right indicate the full marks.

(4) Assume any suitable data if not given and justify the same.

Q.1 (A) What is the use of classification of soils?   [05]

(B) Write a note on characteristics of flow net.   [05]

(C) Explain factors affecting the permeability of soil.   [05]

(D) Explain factors affecting the shear strength of soil.   [05]

Q.2 (A) From first principles establish the relationship between following parameters.   [10]

(I) e, S_r, w and G   (II) e, S_r, G, γ, and γ_w.

(B) Name the method of determining in-situ permeability of coarse grained soil. Derive the expression to find out coefficient of permeability for the same case from two observation wells.   [10]

Q.3 (A) In an unsaturated specimen of clay has a volume of 18.9 cc and mass of 30.2 gm. On oven drying the mass reduces to 18 gm. The volume of dry specimen as determined by displacement of mercury is 9.9 cc. Determine shrinkage limit, specific gravity, shrinkage ratio and volumetric shrinkage.   [10]

(B) Explain the Coulomb theory for shear strength of soil.   [05]

(C) Explain merit and demerit of direct shear test.   [05]

Q.4 (A) A saturated soil sample has a volume of 23 cm³ at liquid limit. The shrinkage limit and liquid limits are 18% and 45% respectively. The specific gravity of solids is 2.73. Determine the minimum volume which can be attained by soil.   [10]

(B) Discuss with sketch any one boring method used in soil exploration program.   [10]

Q.5 (A) Draw the total, effective and neutral stress diagrams for a sand deposit 12 m thick underlain by a soft clay layer. The water table level is at a depth of 4 m from the surface. The soil above GWT has 40% saturation and specific gravity may be taken as 2.65. Take e = 0.57.   [10]

(B) Explain field compaction and its control.   [10]

[TURN OVER

RJ-Con. 12659-15.

Sub:- BDD -II   Date: 4-6-15

Civil

QP Code : 3708

(OLD COURSE)

(4 Hours)   (Total Marks: 100)

(1) Question No **1** is **compulsory**.
(2) Attempt any **four** questions out of remaining **six** questions.
(3) Assume suitable data wherever required.
(4) Figures to the **right** indicate **full** marks.

Q.1) It is proposed to construct a Post Office building in a town. The building is (G+1) R.C.C framed building. Following are the dimensional requirements of various units.

Entrance & moving front space -----30m^2.
Public Counters ----------------------Height 1.6m.-1.8m & Width 0.7m.- 0.9m.
Post Master's room -------------------- 15m^2
Working area for staff --------------- 30m2
Post sorting room -------------------- 30m^2
Treasury room ----------------------- 12m2
Staff rooms (male/female) --------- 12m^2 (each)
Provide Water room, sanitary units, doors & windows, stair etc. of suitable sizes.

Draw a) Developed plan of ground floor.   ---- 15 M.
       b) Line plan of first floor.   ---- 05 M.

Q.2) Draw sectional view of the building planned in Q.No.1   ---- 20 M.

Q.3) a) Draw front elevation of the building planned in Q.No.1   -----10M.
     b) Draw site plan of the building planned in Q.No.1   -----10M.

Q.4) a) Draw foundation plan of the building planned inQ.No.1   -----10M.

     b) Draw Terrace plan of the building planned inQ.No.1   -----10M.

Q.5) Draw Two point perspective with the following details:-   ---- 20M.
       1) Size of Hall = 12m x 10m.
       2) Wall height (including parapet) = 4.2 m.
       3) Plinth Height= 0.6m.
       Assume suitable location & sizes of door, windows & entrance steps.

Q.6) What do you understand by" Architectural Compositions"?   ------ 20M.
     Explain the principles of Architectural compositions.

Q.7) Write Notes on followings (Any four)   -----20M.
     a) Master Plan b) Necessity of Town Planning c) Built Environment.
     d) Green building & its rating. e) Slum Clearance.

RJ-Con. 11990-15.

Sub :- BDD - II   Date: 4-6-15

civil

QP Code : 3252

(4 Hours) [Total Marks : 80

N. B. : (1) Question No. **1** is **compulsory**.
(2) Answer any **three** questions from the remaining.
(3) **All** questions carry **equal** marks.

1. It is proposed to plan and design a Primary Health Centre (P.H.C.) in Rural area with the following facilities as R.C.C. framed structure as (G+1) storied only. Following are the facilities to be provided on both the floors. Assume floor-floor height as 3.6 m.
   Facilities :—
   (i) Entrance & Reception = 30 sq. m.
   (ii) Doctor's Rooms = 4 no. (each 20 sq. m.)
   (iii) Nurses Room = 20 sq. m.
   (iv) Operation Theatre = 50 sq. m.
   (v) General Ward = 100 sq. m.
   (vi) Ladies Ward = 75 sq. m.
   (vii) Store Room = 20 sq. m.
   (viii) Medical Store = 30 sq. m.
   (ix) Changing Room = 20 sq. m.

   Provide Toilets, Passages etc. as per the Bye-laws & Regulations. Draw the following with suitable scale.
   (a) Ground Floor Plan   15
   (b) Line Plan of First Floor   5

2. Draw the SECTIONAL ELEVATION for the building you have planned in Q. No. 1.   20

3. (a) Draw the FRONT ELEVATION for the above building in Q. No. 1.   10
   (b) Draw the FOUNDATION PLAN & section of ONE FOOTING for the building in Q. No. 1.   10

4. Draw the TWO - POINT PERSPECTIVE for the building you have proposed in Q. No. 1. Assume Eye-level at 2.0 m. from ground level. Draw the perspectives for steps, Doors, Windows & Chajja also.   20

[TURN OVER

JP-Con. 11954-15.
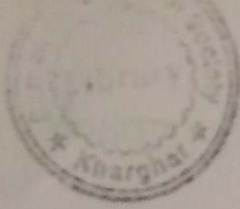
5. (a) Write short notes on the following :–
    (i) Principles of TOWN PLANNING   5
    (ii) Slum clearance & Redevelopment   5
   (b) Draw the ONE-POINT PERSPECTIVE for a WORKSHOP with the   10
       following data :–
       Size of Workshop = 30 m. × 15 m.
       Height of Workshop = 5.0 m. (Excluding pitched Roof)
       Eye-level from Ground level = 3.0 m.
       Plinth height = 0.6 m.

6. (a) Write short notes on the following :–
    (i) GREEN buildings   5
    (ii) Principles of Modular Planning   5
   (b) Draw TWO-POINT PERSPECTIVE with the following data :–   10
       Size of Dining Hall = 30 m. × 12 m.
       Floor-Floor Height = 4.0 m.
       Plinth Height = 0.6 m.
       Eye-level = 2.0 m. from Ground level
       Provide Doors, Windows, Chajja Projection etc.

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