

SECTION – A

There are **FIVE** questions in this section. Answer any **FOUR**.

1. A beam is loaded as shown in Fig. 1(a), which has the cross section shown in Fig. 1(b). Determine the shear stress at the levels indicated. Draw the distribution of shear stress over the section at the mid span of the beam. (26 ¼)
2. Using method of section derive expression for shear force, bending moment and axial force for the beam as loaded in Fig. 2. Draw the shear force, bending moment and axial force diagrams. (26 ¼)
3. Draw shear force and bending moment diagrams for the beam loaded as shown in Fig. 3. (26 ¼)
4. Determine the maximum tensile and compressive stresses developed in the beam loaded as shown in Fig. 4(a). The cross section is an inverted T as shown in Fig. 4(b). (26 ¼)
5. Compute the location of shear center of the beam with cross section shown in Fig. 5. (26 ¼)

SECTION – B

There are **FIVE** questions in this section. Answer any **FOUR**.

Notations carry their usual meanings.

6. A beam is subjected to two axial forces as shown in Fig. 6(a). The idealized stress-strain property of the material, the beam is made of, is shown in Fig. 6(b). Calculate deformation at the free end of the beam. (26 ¼)
7. Two high-strength steel rods of different diameters are attached at A and C and support a mass M at B, as shown in Fig. 7. What mass M can be supported? The ultimate strength of the rods is 800 MPa and the factor of safety is to be 2. Rod AB has $A = 200 \text{ mm}^2$, rod BC has $A = 400 \text{ mm}^2$. (26 ¼)

CE 221/WRE

8. A solid shaft is subjected to torques T_1 and T_2 as shown in Fig. 8. T_1 and T_2 are generated by motors of 12 hp rotating at 36 Hz and 24 Hz respectively in the directions shown in the figure. Design the shaft if the maximum allowable shear stress is 55 MPa, given:

(26 ¼)

$$T = \frac{119 * hp}{f} (N-m)$$

9. A steel shaft AC is subjected to torques $T_1 = 300$ N-m and $T_2 = 150$ N-m as shown in Fig. 9. Segment AB is solid having cross-section as shown in Sec a-a and segment BC is hollow as shown in Sec b-b. Determine maximum stresses at segments AB and BC and angle of twist at point C. Given: $G = 80$ GPa.

(26 ¼)

Table of Coefficients for Rectangular Bars

b/t	1.00	1.50	2.00	3.00	6.00	α
α	0.208	0.231	0.246	0.267	0.299	0.333
β	0.141	0.196	0.229	0.263	0.299	0.333

10. For the planer structures shown in Figures 10(a) and 10(b), calculate reactions and determine axial force, shear force and bending moment caused by the applied loads at sections indicated in the figures.

(26 ¼)

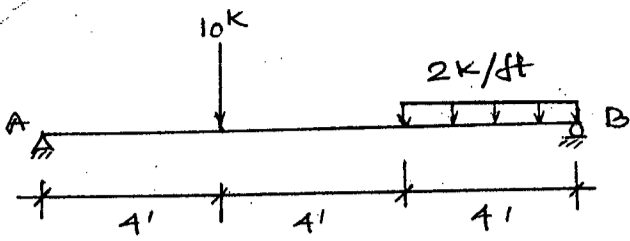


Fig 1(a)

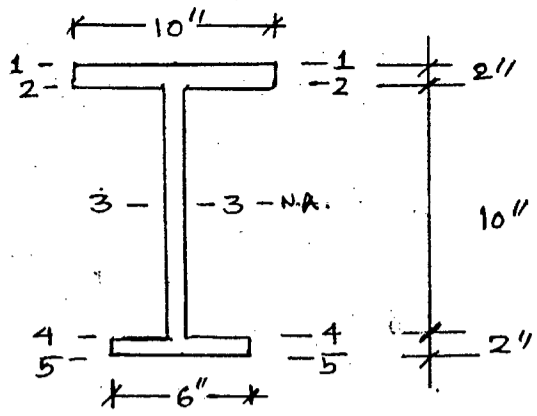


Fig 1(b)

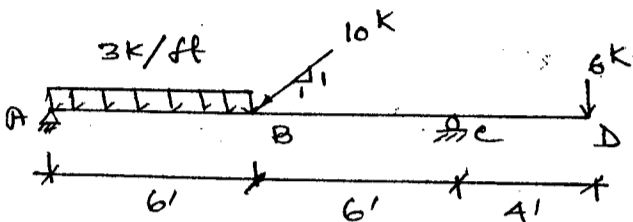


Fig 2

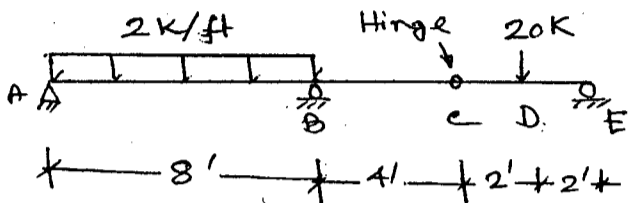


Fig 3

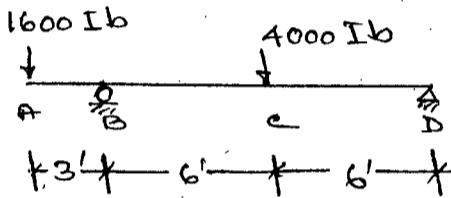


Fig 4(a)

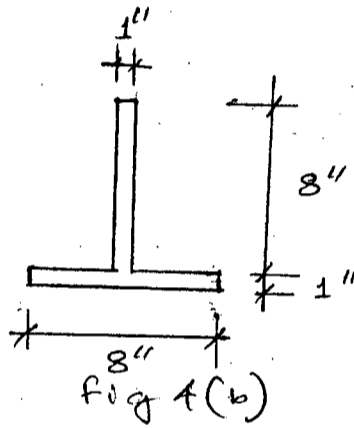


Fig 4(b)

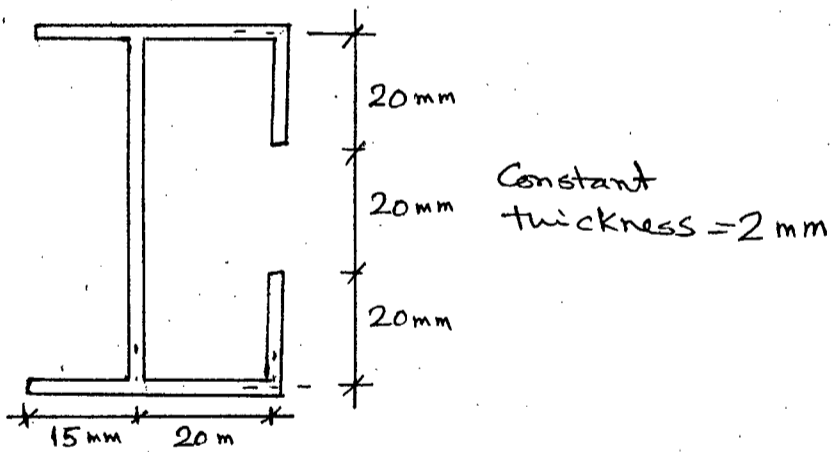
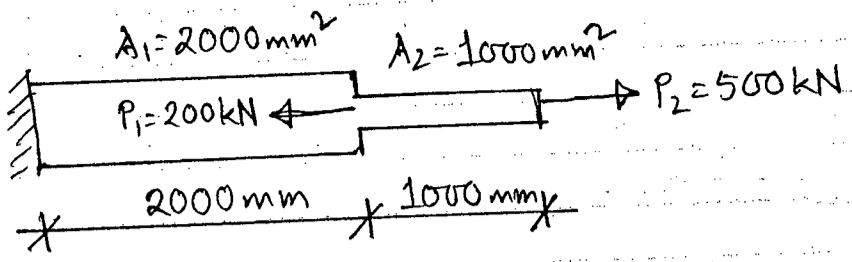
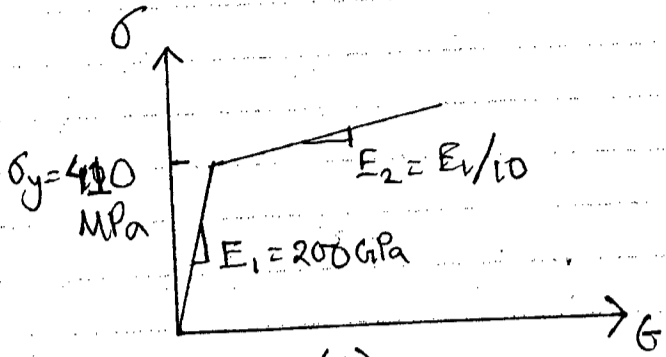


Fig 5



(a)



(b)

Fig. 6

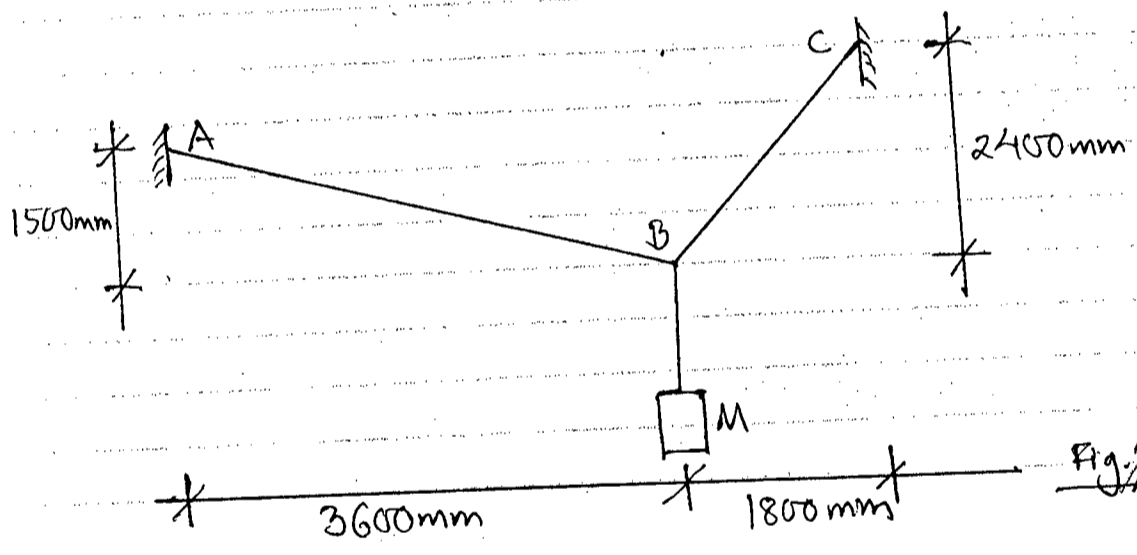


Fig. 7

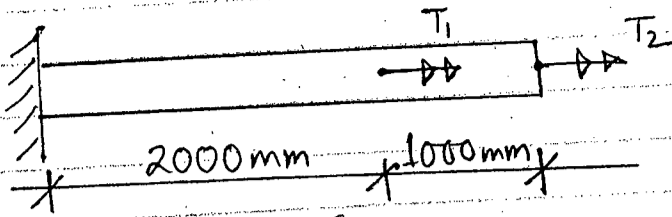


Fig. #8

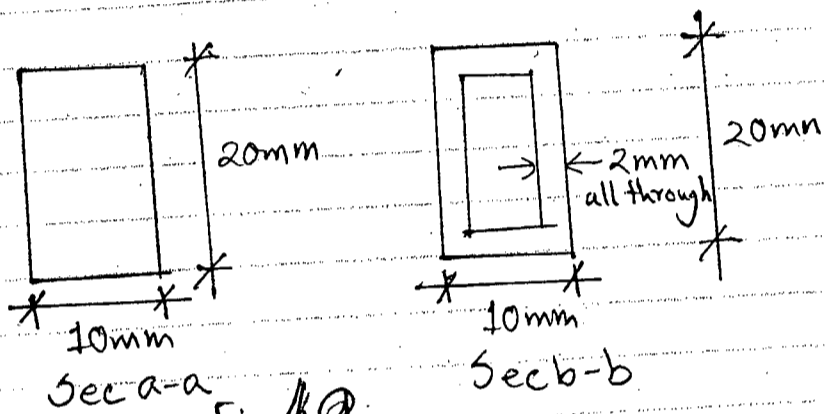
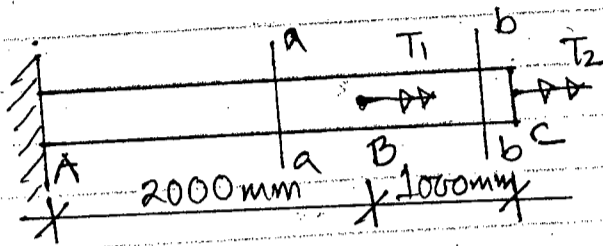
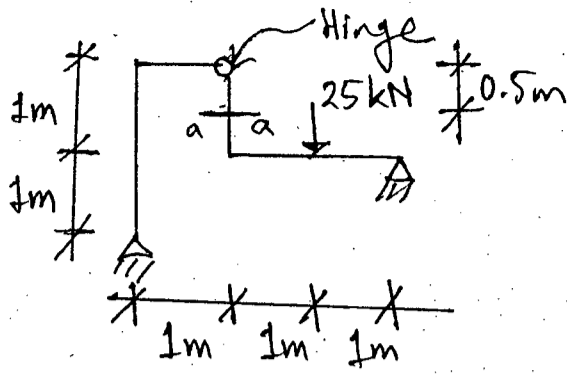
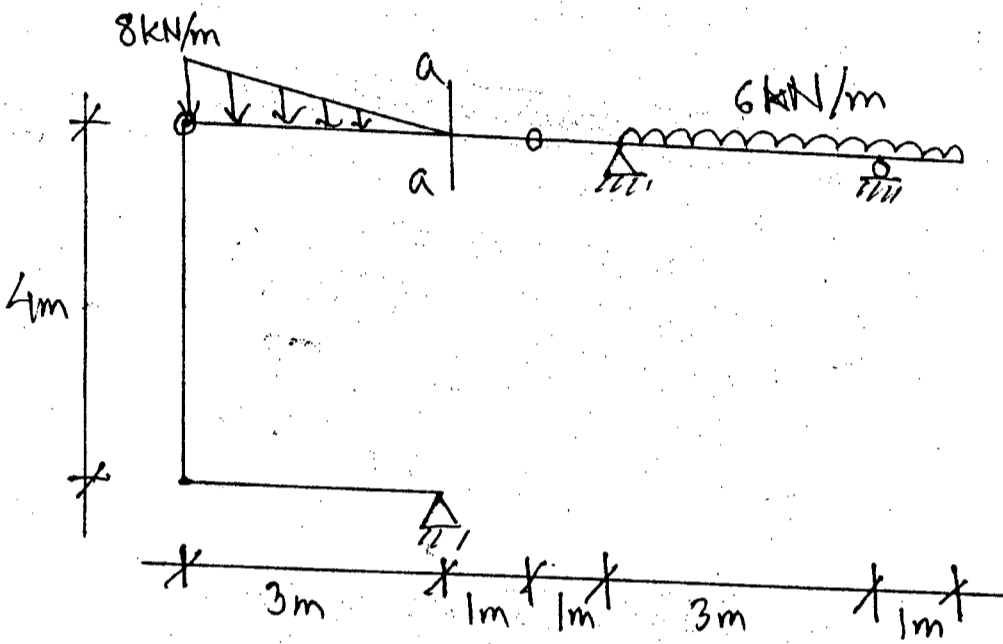


Fig. #9



(a)



(b)

Fig. # 10

Extra

L-2/T-1/WRE

Date : 12/05/2014

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-2/T-1 B. Sc. Engineering Examinations 2012-2013

Sub : **CE 291** (Engineering Materials)

Full Marks: 210

Time : 3 Hours

USE SEPARATE SCRIPTS FOR EACH SECTION

The figures in the margin indicate full marks.

SECTION – A

There are **FOUR** questions in this section. Answer any **THREE**.

Assume reasonable value of missing data.

1. (a) The following masses of materials are required for 1 m³ of concrete. Total moisture content of fine aggregate and coarse aggregate are 3.5% and 0.5% respectively. Absorption capacity of aggregates is 1.5%. Air content is 2% and maximum size of coarse aggregate is 20 mm. (20)
- (i) Compute adjusted batch masses.
- (ii) Calculate the w/c ratio.
- (iii) What is the expected slump range of the batch of concrete?
- (iv) What is the expected design compressive strength of the concrete?

Materials	Weight (kg)
Total mixing water	194
Cement	279
Fine aggregate (SSD)	779
Coarse Aggregate (SSD)	1150

- (b) Define Spalls, Illustrate with neat sketches how a spalled area of a floor slab can be repaired with ferrocement. (15)

2. (a) A concrete mix is required for a 1.0 m thick mat foundation on a soil where sulfate content is found to be threat to the durability of foundation concrete. So w/c ratio of concrete was specified to less than or equal to 0.45. Design compressive strength of concrete is 20 MPa at 28 days. Design the mix as per ACI method using the following information and data given in Tables 1 to 4. (25)

- * Cement is PPC (Specific gravity 3.15)
- * Coarse aggregate is crushed stone and fine aggregate is Sylhet sand (See Table 4)
- * Concrete will be transported from batching plant to the site by pumping. Slump value of fresh concrete must not be less than 100 mm.

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CE 291

Contd... Q. No. 2(a)

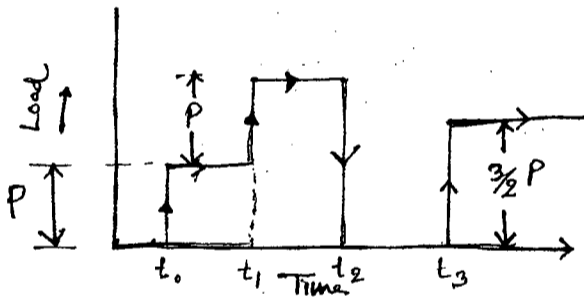
* A water reducing admixture (Specific gravity is 1.2) will be used (1000 ml per 100 kg cement) so that you can reduce about 15% water content by keeping same workability.

(i) Find the mass of water, fine aggregate (SSD) and coarse aggregate (SSD) for 1 m³ fresh concrete.

(ii) As per mix proportions, calculate the materials required to cast 9 cylinders of standard dimensions in the lab.

(b) Qualitatively draw the gradation curve of a sample of aggregate having zero Fineness Modulus. Also comment on the type of gradation curve. (10)

3. (a) For the loading history shown below, draw the likely strain response of (i) elasto-plastic and (ii) elasto-visco-plastic material. Assume equal time intervals, i.e., $\Delta t = t_1 - t_0 = t_2 - t_1 = t_3 - t_2$ (12)



(b) "Strength, durability and economy must be considered in concrete production" — Explain why. (8)

(c) Discuss the factors affecting segregation. (5)

(d) Write down the criteria for selecting maximum size of aggregates. Discuss the effect of grading of aggregate on workability. (10)

4. (a) "Compressive Strength, w/c ratio and workability of concrete are related" — explain. (10)

(b) Briefly describe the causes of corrosion of a reinforced concrete member. (10)

(c) Write down the desirable characteristics of aggregates to be used in making ferrocement. Why ferrocement is used for repairs, rehabilitation and retrofitting? (9)

(d) Define FRP. Why the use of FRP as retrofit material has gained much notable success in recent years? (6)

CE 291

SECTION - B

There are **FOUR** questions in this section. Answer any **THREE**.

5. (a) Write down the chemical composition of a good brick and factors affecting the quality of bricks. What is the role of pebbles of stone, gravel and Iron pyrites in the composition of brick? (3+3+3=9)
- (b) Describe various field tests of brick. (6)
- (c) Diagrammatically show three principal axes of wood with respect to grain direction and growth of rings. (5)
- (d) Describe the operation procedure of a Hoffman's Kiln including the functions of different chambers and doors. In the 2nd cycle from which chamber loading need to be started and how it is controlled. (12+3=15)
6. (a) What is creosoting? Write down the types and application of this method of preservative. (4)
- (b) Briefly describe different types of natural defects of timber. (7)
- (c) What is converted timber? What are the natural characteristics affecting mechanical properties of wood? (4)
- (d) Differentiate between: (5×4=20)
- (i) Brown Rot & White Rot
 - (ii) Cross sawing & Rift sawing with figure
 - (iii) Thermal conductivity & Thermal diffusivity
 - (iv) Natural seasoning & Water seasoning
 - (v) Hard wood & Soft wood.
7. (a) Explain hydration process by calorimetric curve of Portland cement. (11)
- (b) Advantages of PPC over OPC. (4)
- (c) Differentiate between: (5×4=20)
- (i) Argillaceous matter & Calcareous matter
 - (ii) Air entraining cement & Low heat of hydration cement
 - (iii) Calcined lime & Hydraulic lime
 - (iv) OPC & PPC
 - (v) Hydrated lime & Artificial hydraulic lime.

CE 291

8. (a) What are the factors responsible for hydraulicity of lime? Explain the composition of different types of hydraulic lime. (10)
- (b) Why slaked lime should be fresh and should not be kept in damp position? Write down 3 uses of fat lime. (5)
- (c) Define fiber saturation point of wood. If the basic specific gravity of wood is 0.56. What is the maximum moisture content and in which moisture content wood will sink? (2+5=7)
- (d) Write down the phase compositions and their relative proportions in a typical Portland cement. What is the role of C_4AF & C_2S in hydration of cement? (10)
- (e) Explain briefly the mechanism of water reducing admixture. (3)
-

Table 1

Water/cement ratio for non-air entrained concrete		
mean compressive strength		
psi	MPa	w/c
6000	41	0.41
5000	34	0.48
4000	28	0.57
3000	21	0.68
2000	14	0.82

Table 2

Mixing water content (kg/m ³) for non-air entrained concrete								
Maximum size of coarse aggregate (mm)	9.5	12.5	19	25	37.5	50	75	150
slump (mm)								
25 to 50	207	199	190	179	166	154	130	113
75 to 100	228	216	205	193	181	169	145	124
150 to 175	243	228	216	202	190	178	160	-
Entrapped air (%)	3	2.5	2	1.5	1	0.5	0.3	0.2

Table 3

Dry rodded volume of coarse aggregate per unit volume of concrete				
maximum size of aggregate (mm)	Fineness Modulus of Fine Aggregate			
	2.40	2.60	2.80	3.00
9.5	0.50	0.48	0.46	0.44
12.5	0.59	0.57	0.55	0.53
19	0.66	0.64	0.62	0.60
25	0.71	0.69	0.67	0.65
37.5	0.75	0.73	0.71	0.69
50	0.78	0.76	0.74	0.72
75	0.82	0.80	0.78	0.76
150	0.87	0.85	0.83	0.81

Table 4

Material properties of fine aggregate and coarse aggregate		
Property	Value	
Bulk specific gravity of fine aggregate (OD)=	2.52	
Bulk specific gravity of coarse aggregate (OD)=	2.62	
Maximum size of coarse aggregate	25	mm
Fineness Modulus of fine aggregate	2.80	
Absorption capacity of fine aggregate	1.50	%
Absorption capacity of coarse aggregate	1.00	%
Total moisture content of fine aggregate in lab	3.50	%
Total moisture content of coarse aggregate in lab	0.5	%
Dry rodded bulk density of fine aggregate	1570	kg/m ³
Dry rodded bulk density of coarse aggregate	1530	kg/m ³

19-05-14

L-2/T-1/WRE

Date : 19/05/2014

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-2/T-1 B. Sc. Engineering Examinations 2012-2013

Sub : **MATH 231** (Differential Equation)

Full Marks: 210

Time : 3 Hours

USE SEPARATE SCRIPTS FOR EACH SECTION

The figures in the margin indicate full marks.

SECTION - A

There are **FOUR** questions in this section. Answer any **THREE**.

Symbols used have their usual meaning.

1. (a) Form a differential equation from the relation $\frac{x^2}{a^2 + \lambda} + \frac{y^2}{b^2 + \lambda} = 1$, eliminating λ . (11)

(b) Solve: $y - x \frac{dy}{dx} = a \left(y^2 + \frac{dy}{dx} \right)$ (12)

(c) Solve: $\left(x \sin \frac{y}{x} - y \cos \frac{y}{x} \right) dx + x \cos \frac{y}{x} dy = 0$ (12)

2. (a) What is exact differential equation? Solve: $y \ln y dx + (x - \ln y) dy = 0$ (11)

(b) Solve: $\frac{dy}{dx} + \frac{y}{2x} = \frac{x}{y^3}$, at $y(1) = 2$. (12)

(c) Solve the Cauchy-Euler equation, $(1+x)^2 \frac{d^2 y}{dx^2} + (1+x) \frac{dy}{dx} + y = 2 \sin[\ln(1+x)]$. (12)

3. Solve the following differential equations:

(a) $(D^2 - 2D + 1)y = xe^x \sin x$. (12)

(b) $(D^3 - 3D^2 + 3D - 1)y = (x+1)e^x$. (11)

(c) $(D^2 - 1)y = x^2 \cos x$. (12)

4. Solve the following differential equation in series by Fröbenius method: (35)

$$x^2 y'' + xy' + (x^2 - 4)y = 0, \text{ near } x = 0.$$

Contd P/2

MATH 231/WRE**SECTION - B**There are **FOUR** questions in this section. Answer any **THREE**.

5. (a) Solve the following first order PDEs

(i) $(y - zx)p + (x + yz)q = x^2 + y^2$ (8)

(ii) $x(y^2 + z)p - y(x^2 + z)q = z(x^2 - y^2)$ (8)

(b) Solve the following PDEs by Charpit's method

(i) $px + qy = pq$ (8)

(ii) $q = (z + px)^2$ (11)

6. Solve the following higher order PDEs

(a) $(D_x^3 - 7D_x D_y^2 - 6D_y^3)z = \sin(x + 2y)$ (10)

(b) $(D_x^2 - D_x D_y - 2D_y^2 + 2D_x + 2D_y)z = e^{2x+3y} + xy$ (13)

(c) $(x^2 D_x^2 - xy D_x D_y - 2y^2 D_y^2 + x D_x - 2y D_y)z = \log\left(\frac{y}{x}\right)$ (12)

7. (a) Show that $J_{3/2}(x) = \sqrt{\frac{2}{\pi x}} \left(\frac{\sin x}{x} - \cos x \right)$ (12)

(b) Show that $J_n(x) = \frac{1}{\pi} \int_0^\pi \cos(n\phi - x \sin \phi) d\phi$ where n is a positive integer. (13)

(c) Prove that $2J'_n(x) = J_{n-1}(x) - J_{n+1}(x)$. (10)

8. (a) Show that $P_n(x) = \frac{1}{2^n n!} \frac{d^n}{dx^n} (x^2 - 1)^n$ (14)

(b) Use the generating function of Legendre's polynomial to prove that (10)

$$(n+1)P_{n+1}(x) = (2n+1)x P_n(x) - nP_{n-1}(x)$$

(c) Show that $\int_{-1}^1 (x^2 - 1) P_{n+1}(x) P'_n(x) dx = \frac{2n(n+1)}{(2n+1)(2n+3)}$ (11)

EXTRA

L-2/T-1/WRE

Date : 26/05/2014

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-2/T-1 B. Sc. Engineering Examinations 2012-2013

Sub : **WRE 203** (Engineering Geology and Geomorphology)

Full Marks: 210

Time : 3 Hours

USE SEPARATE SCRIPTS FOR EACH SECTION

The figures in the margin indicate full marks.

SECTION – A

There are **FOUR** questions in this section. Answer any **THREE**.

1. (a) What do you understand by lacustrine deposits? Describe different types of lacustrine deposits. (10)
(b) Write down the main purpose of making stream order and also briefly describe the Horton's system of stream ranking. (10)
(c) Describe the flood plains and associated features in Bangladesh context. (15)
2. (a) Define geomorphic processes and make an outline of these processes. (5)
(b) Write short note on (i) physical weathering processes (ii) chemical weathering processes. (10)
(c) Differentiate various stages of streams. (10)
(d) Briefly describe different theories of meandering river. (10)
3. (a) Write short note on (i) Moraines (ii) Kames and Kettleholes (iii) Braided stream. (15)
(b) What do you understand by Aeolian deposits? Classify and describe Aeolian deposits according to Bagnold (1941). (15)
(c) Define form factor and compactness coefficient. (5)
4. (a) Briefly describe different types of drainage patterns. (15)
(b) Define and classify fluvial deposits. (10)
(c) Write short note on (i) Deltaic plain deposits (ii) alluvial fans and bajadas. (6)
(d) Define (i) beach (ii) off-shore (iii) backshore (iv) inshore. (4)

Contd P/2

WRE 203

SECTION – B

There are **FOUR** questions in this section. Answer any **THREE**.

5. (a) What is metamorphism? Describe the agents of metamorphism. (10)
(b) Describe foliated and unfoliated texture of metamorphic rock. (10)
(c) Briefly discuss the types and texture of igneous rock. (15)
6. (a) Define Ferromagnesian Minerals. Illustrate different types of ferromagnesian minerals. (15)
(b) Write short notes on (20)
(i) Quartz;
(ii) Plagioclase;
(iii) Oxide Minerals;
(iv) Mineraloids.
7. (a) Briefly describe the mechanisms that convert unconsolidated rock forming minerals into consolidated coherent rock. (15)
(b) Differentiate between (15)
(i) Anticline and Syncline
(ii) Graben and Horst
(iii) Reverse fault and Strike-slip fault
(c) What are the plate boundaries? Show them in a figure. (5)
8. (a) Describe the 'Elastic Rebound Theory' with sketches. (10)
(b) Discuss the types of body waves from seismicity with figure. (10)
(c) Write down the geological characteristics of Bangladesh. Also describe why Bangladesh is susceptible to earthquake? (10)
(d) What are the tectonic blocks of Bangladesh? (5)
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BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-2/T-1 B. Sc. Engineering Examinations 2012-2013

Sub : **HUM 313** (Accounting)

Full Marks : 210

Time : 3 Hours

The figures in the margin indicate full marks.

USE SEPARATE SCRIPTS FOR EACH SECTION

SECTION - AThere are **FOUR** questions in this Section. Answer any **THREE** questions.

1. (a) Given below is the Cost Data of X company for the year 2013. All the figures are in Taka. (20 1/3)

Purchase of Raw Material	80,000
Freight charge	2,000
Labor Cost	40,000
Factory machine repair	5,000
Machine depreciation	10,000
Factory electricity bill	10,000
Revenue	8,00,000
Newspaper promotion	12,000
Indirect Labor	30,000
Office furniture repair	8,000
Company manager's salary	70,000

Inventory in units:	Beginning of the year	Ending of the year
Raw Materials	50,500	39,500
Work in process	12000	7000
Finished Goods	38000	22000

Requirements:

- (i) Prepare a Cost Statement for the year 2013.
(ii) Calculate what is the net income.

- (b) Consider the following data: (3)

Sales Commission	15,000
Factory machine insurance	20,200
Promotional expense	40000
Office telephone	3000
Manager's salary	150,000
Carriage expense	2,500

Requirement: Distinguish between the amounts of Administrative Expense and Selling Expense.

HUM 313(WRE)

2. (a) V company sells telephone wire. The company's cost and sales data is given below:

Sales (20000) units at 60 taka per unit

Variable expense 45 taka per unit. Fixed expense 2,40,000 taka.

(20)

Requirements:

- (i) Prepare a Contribution Margin Income Statement.
- (ii) Compute the company's Contribution Margin ratio and variable expense ratio.
- (iii) Compute the company's break-even point in sales and in units. Use the contribution margin method to answer. Compute Margin of Safety in taka and in percent.
- (iv) Assume that the company's sales increase by 4,00,000 taka next year. If everything remains unchanged, how much will the company's net operating income increase?
- (v) Refer to the original data. If the company wants to sack on employee who was being paid 70000 taka salary and also expects to decrease the variable cost per unit by 15% what will be the change in net operating income?

(b) What is the difference between Profit and Contribution margin?

(3 1/3)

3. (a) ABC Company uses job-order costing. It incurred the following costs for job M301: 20 pounds of raw materials (all direct) were issued to be used for job M301 at a cost of BDT 20 per pound. Three people were assigned to work on Job M301 at a rate of BDT 120 per hour. Records show that a total of 25 direct labor-hours were worked on Job M301. Manufacturing overhead is applied based on direct labor-hours. At the beginning of the year, estimated total manufacturing overhead was BDT 450,000 and the total direct labor hours incurred would be 50,000.

Required: Determine the cost assigned to Job M301.

(5 1/3)

(b) A textile company has produced 12,000 jackets during the year 2014. it has the following information-

(18)

	Actual	Standard
Direct material purchased and used	23,000 square yards at a rate of Tk. 25 per yard	1.75 square used for 1 output at Tk. 35 per yard
Direct labor used	9000 hours at the rate of Tk. 20 per hour	0.80 hour used for 1 unit output at Tk. 25 per hour
Variable factory overhead	5,000 machine hours at Tk. 27 per hour	0.45 hour used for 1 unit output at Tk. 25 per hour
Fixed factory overhead	Tk. 250,00	Budgeted Tk. 2,27,000; Budgeted machine hour 9,000 hours

Required:

- (i) Calculate material, labor and factory overhead variance.
- (ii) What does such variance indicate?

HUM 313(WRE)

4. (a) Explain the purposes and criteria for allocating indirect cost to cost objects. (3 1/3)

(b) Human Resources (H.R), Data Processing (D.P), and Risk Management (R.M) provide services to the Machining and Assembly production departments, and in some cases, the services departments also provide services to each other: (20)

Total cost (Tk.)	Service Dept.	% of services provided by the service department				
		HR	DP	RM	Machining	Assembly
80000	HR	-	20%	10%	40%	30%
120000	DP	8%	-	7%	30%	55%
40000	RM	-	-	-	50%	50%
		HR	DP	RM	Machining	Assembly
Cost prior to allocation:		80,000	120,000	40,000	100,000	60,000

Required: Allocate the service departments cost using-

- (i) Step-Down Method
- (ii) Linear Equation Method.

SECTION – B

There are **FOUR** questions in this Section. Answer any **THREE**.

5. (a) "All transactions are event but all events are not transactions." Explain. (3)

(b) "Accounting is an information system." Explain how an accounting system can be compared with an information system. (3)

(c) Jenny Brown opened a law office, on July 1, 2008. On July 31, the balance sheet showed Cash \$5,000, Accounts Receivable \$1,500, Supplies \$500, Office Equipment \$6,000, Accounts Payable \$4,200, and Jenny Brown, Capital \$8,800. During August the following transactions occurred: (17 1/3)

- (i) Collected \$1,200 of accounts receivable.
- (ii) Paid \$2,800 cash on accounts payable.
- (iii) Earned revenue of \$8,000 of which \$3,000 is collected in cash and the balance is due in September.
- (iv) Purchased additional office equipment for \$2,000, paying \$400 in cash and the balance on account.
- (v) Paid salaries \$2,500, rent for August \$900, and advertising expenses \$400.
- (vi) Withdrew \$700 in cash for personal use.
- (vii) Received \$1,500 from Standard Federal Bank-money borrowed on a note payable.
- (viii) Incurred utility expense for month on account \$220.

Required:

Prepare a tabular analysis of the August transactions beginning with July 31 balances.

HUM 313(WRE)

6. (a) Surepar Miniature Golf and Driving Range was opened on March 1 by Bill Affleck.

The following selected events and transactions occurred during March:

(23 1/3)

Date	Transaction
March: 1	Invested \$60,000 cash in the business.
3	Purchased Lee's Golf Land for \$38,000 cash. The price consists of land \$23,000, building \$9,000, and equipment \$6,000. (Make one compound entry)
5	Advertised the opening of the driving range and miniature golf course, paying advertising expenses of \$1,600.
6	Paid cash \$1,480 for a one year insurance policy.
10	Purchased golf clubs and other equipment for \$2,600 from Parton Company payable in 30 days.
18	Received \$800 in cash for golf fees earned.
19	Sold 100 coupon books for \$15 each. Each book contains 10 coupons that enable the holder to play one round of miniature golf or to hit one bucket of golf balls.
25	Withdrew \$1,000 cash for personal use.
30	Paid salaries of \$600.
30	Paid Parton Company in full.
31	Received \$500 cash for fees earned.

Instructions

- (a) Journalize the March Transaction.
- (b) Post the journals to the ledger accounts.
- (c) Prepare a trial balance on March 31.

7. (a) What do you mean by GAAP? Discuss the principles of GAAP.

(3)

(b) Lindy Rig started her own consulting firm, Vektek Consulting, on May 1, 2005. The trial balance at May 31 is as follows:

(20 1/3)

VEKTEK CONSULTING			
Trial Balance			
May 31, 2005			
Account Number	Accounts Title	Debit (Tk.)	Credit (Tk.)
101	Cash	7,700	
110	Accounts Receivable	4,000	
120	Prepaid Insurance	2,400	
130	Supplies	1,500	
135	Office Furniture	12,000	
200	Accounts Payable		3,500
230	Unearned Service Revenue		3,000
300	L. Rig. Capital		19,100
400	Service Revenue		6,000
510	Salaries Expense	3,000	
520	Rent Expense	1,000	
		<u>31,600</u>	<u>31,600</u>

Other Data:

- Tk. 500 of supplies have been used during the month.
- Travel expense incurred but not paid on May 31, 2004, Tk. 200.
- The insurance policy is for 2 years.

HUM 313(WRE)

Contd ... Q. No. 7(b)

Tk. 1,000 of the balance in the unearned service revenue account remains unearned at the end of the month.

May 31 is a Wednesday, and employees are paid on Fridays, Vektek Consulting has two employees, who are paid Tk. 500 each for a 5-day work week.

The office furniture has a 5-year life with no salvage value. It is being depreciated at Tk. 200 per month for 60 months.

Invoices representing Tk. 1,000 of services performed during the month have not been recorded as of May 31.

Required:

- (i) Prepare the adjusting entries for the month of May.
- (ii) Prepare an Adjusted Trial Balance.

8. Adjusted trial balance column the work sheet for *Eagle Company*, owned by Alfred Eagle, is given below:

(23 1/3)

<i>Eagle Company</i> Adjusted Trial Balance June 30, 2010				
SL	Accounts Title	Ref	Debit (Tk.)	Credit (Tk.)
1	Cash	101	13,600	
2	Accounts Receivable	102	15,400	
3	Supplies	103	2,000	
4	Prepaid Insurance	104	2,800	
5	Office Equipment	202	34,000	
6	Accumulated Depreciation Office Equipment	315		8,000
7	Notes Payable	301		20,000
8	Accounts Payable	302		6,000
9	Salaries Payable	303		3,500
10	Interest Payable	304		800
11	A. Eagle, Capital	401		25,000
12	A. Eagle, Drawings	402	10,000	
13	Service Revenue	501		88,000
14	Advertising Expense	601	12,000	
15	Supplies Expense	602	5,700	
16	Depreciation Expense	603	8,000	
17	Insurance Expense	604	5,000	
18	Salaries Expense	605	42,000	
19	Interest Expense	606	800	
			151,300	151,300

Instruction:

- (a) Prepare an income statement for the year ended on June 30,2010.
- (b) Prepare an Owner's Equity Statement for the period assuming Alfred Eagle did not make any additional investments in the business during the year.
- (c) Prepare a classified balance sheet. Assume that \$5,000 of the notes payable become due for payment within next year.