Central University of Haryana
ODD Semester Term End Examination Dec 2018
B.Tech. Programmes
Branch: Printing & Packaging

Course Code: BT PPT 303 Max Time: 3 Hours
Course Title: Package Design & Development Max Marks: 70

Instructions:
Question Number **one (PART-I)** is compulsory and carries total 14 marks (Each sub Question carries two Marks).
Question Numbers 2(two) to 5(five) carry fourteen marks each with internal choice.

PART -I

Q. No.1

(a) (a) What is design?
(b) Principles of design.
(c) Use of colour sheme.
(d) What is rough layout?
(e) What is publicity?
(f) Use of DTP.
(g) What is house style?

PART –II

Q. No. 3

Write a detailed note on fundamentals of design.
or
Write a detailed note on principles of design.

Q. No. 3

Discuss on colour theory and also mention it's various applications.
or
Mention the various methods of type arrangement and discuss them in detail.

Q. No. 4

Write a detailed note on the role of design in sales promotion.
or
What is the role of printing planning? Also mention the importance of design management.

Q. No. 5

Discuss on various softwares used for designing in detail.
or
Differentiate good copy and bad copy. Also mention the importance of imposition schemes.

Central University of Haryana
Third Semester Term End Examination Dec. 2018
B.Tech. Programmes
Branch: Electrical Engineering

Course Code: BT EE 301
Course Title: Electrical Machines-I

Max Time: 3hrs
Max Marks: 70

Instructions:
Question Number **one (PART-I)** is compulsory and carries total 14 marks (Each sub Question carries two Marks).
Question Numbers 2(two) to 5(five) carry fourteen marks each with internal choice.

PART -I

Q.No.1
(a) Draw phasor diagram for unity power factor loading condition of real transformer.
(b) What do you mean by all day efficiency of transformer?
(c) What are the requirements of three winding transformers?
(d) Why transformers are rated in kVA not in kW?
(e) What are the conditions and requirements of voltage building up in self excited DC generators?
(f) What do you mean by armature reaction in DC machines?
(g) Derive an expression for pitch factor?

PART –II

Q.No.2
(i) Explain open circuit test and short circuit test of transformer to determine the equivalent circuit parameters.
(ii) A single-phase, 40-kVA, 6600-V/250-V, transformer has primary and secondary resistances $R_1 = 10\ \Omega$ and $R_2 = 0.02\ \Omega$, respectively. The equivalent leakage reactance as referred to the primary is 35 Ω. Find the full-load regulation for the load power factor of (*a*) unity, (*b*) 0.8 lagging, and (*c*) 0.8 leading. [7+7]

OR

Q.No.2
(i) Derive the condition for maximum efficiency of transformer.
(ii) A two-winding, step-down transformer has a turns-ratio (N_2/N_1) of 0.5. The primary winding resistance and reactance are 2.5 Ω and 6 Ω, whereas the secondary winding resistance and reactance are 0.25 Ω and 1 Ω, respectively. Its magnetizing current and core-loss current are 51.5 mA and 20.6 mA, respectively. While in operation, the output voltage for a load of $25\angle 30°\ \Omega$ is found to be 50 V. Determine the supply voltage, the current drawn from the supply and the power factor. [4+10]

Q.No.3
(i) What are the important requirements and conditions for parallel operation of three-phase transformers?
(ii) Explain switching transients and inrush current phenomenon of transformer with suitable waveforms. [7+7]

OR

Q.No.3
(i) Explain Sumpner's test of transformer.

(ii) Explain star/zig-zag connection of three phase transformer with phasor diagram. [7+7]

Q.No.4

(i) Explain doubly excited system and derive expression for developed torque.

(ii) Differentiate between concentrated and distributed windings. Derive expression for distribution factor. [7+7]

OR

Q.No.4

(i) Explain singly excited system and derive expression for developed force.

(ii) A 3-phase, 50-Hz, 20-pole, machine with star-connected stator winding has 180 slots on the stator. There are 8 conductors per slot and the coils are short-pitched by 15^0. The flux per pole is 25 mWb. Assuming sinusoidally distributed flux, calculate (a) pitch factor and (b) distribution factor. [7+7]

Q.No.5

(i) Explain commutation process with suitable diagram. What are the methods to improve it?

(ii) A 4-pole shunt generator with lap connected armature has armature and field resistances of 0.2 Ω and 50 Ω, respectively. It supplies power to 100 lamps, each of 60 W, 200 V. Calculate the total armature current, the current per path and the generated emf. Allow a brush drop of 1 V at each brush. [4+10]

OR

Q.No.5

(i) Derive expression for torque developed in DC motors.

(ii) A series motor runs at 600 rpm when taking a current of 110 A from a 230 V supply. The useful flux per pole for 110 A is 24 mWb and that for 50 A is 16 mWb. The armature resistance and series-field resistance are 0.12 Ω and 0.03 Ω. Calculate the speed when the current has fallen to 50 A. [4+10]

END

Central University of Haryana
ODD Semester Term End Examination Dec 2018
B.Tech. Programmes
Branch: Department of Printing & Packaging Technology

Course Code: BT PPT 302
Course Title: Fundamentals of Management
Semester: Third

Max Time: 3 hrs
Max Marks: 70

Instructions:
Question Number **one (PART-I)** is compulsory and carries total 14 marks (Each sub Question carries two Marks).
Question Numbers 2(two) to 5(five) carry fourteen marks each with internal choice.

PART -I

Q. No.1 Write short note on the following:

(a) Define Management.
(b) Decentralization.
(c) Production Control.
(d) Marketing Management.
(e) Capital Structure.
(f) Staffing.
(g) Working Capital.

PART –II

Q. No.2 "Management is as an art, science and profession" In the light of this statement explain yours views about it.

OR

Q. No.2 Explain in brief Henry Fayol's principles of management.

Q. No.3 What is production management? Explain the functions and responsibilities of production management.

OR

Q. No 3 What is inventory control? Explain significance and various techniques of inventory control.

Q. No.4 What do you mean by marketing research? Explain the importance and process of marketing research.

OR

Q. No .4 What is advertising? Describe in brief the functions and criticism of advertising.

Q. No.5 What is financial management? Discuss the scope, objectives and functions of financial management.

OR

Q. No.5 Explain the various sources of finance through which a company can raise its capital. Also describe the importance and disadvantages of these sources.

Central University of Haryana
III Semester Term End Examination Dec 2018
B.Tech. Programmes (2018-19 session)
Branch: Civil Engineering

Course Code: BT CE 303 **Max Time: 3 Hours**
Course Title: Structural Analysis - I **Max Marks: 70**

Instructions:
Question Number **one (PART-I)** is compulsory and carries total 14 marks (Each sub Question carry two Marks).
Question Numbers 2(two) to 5(five) carry fourteen marks each with internal choice.

PART -I

Question No.1 $(7 \times 2 = 14)$

(a) What is modulus of elasticity and modulus of rigidity?
(b) State Maxwell's reciprocal theorem.
(c) The shearing stresses in a solid shaft is not to exceed 40 N/mm^2 where the torque transmitted is 20000 Nm. Determine the minimum diameter of the shaft.
(d) What is slenderness ratio and equivalent length of column?
(e) Define hoop stress and longitudinal stress.
(f) A cantilever beam of span 3 m carries a point load of 10 kN at the free end. What is the value of support moment?
(g) Differentiate between polar modulus and section modulus.

PART –II

Unit-I

Question No.2

(a) The stress in a flat steel plate in conditions of plane stress are:
$\sigma_x = 10000$ N/mm^2; $\sigma_y = -6000$ N/mm^2; $\tau_{xy} = 8000$ N/mm^2.
Find the magnitude and orientation of principal stresses in the plane of failure. (6)
(b) A cast iron beam of T- section having dimensions 10 cm × 10 cm × 2 cm is simply supported on a span of 8 m. The beam carries a udl of 1.5 kN/m length on the entire span. Determine the maximum tensile and maximum compressive stresses. (8)

Or

Question No.2

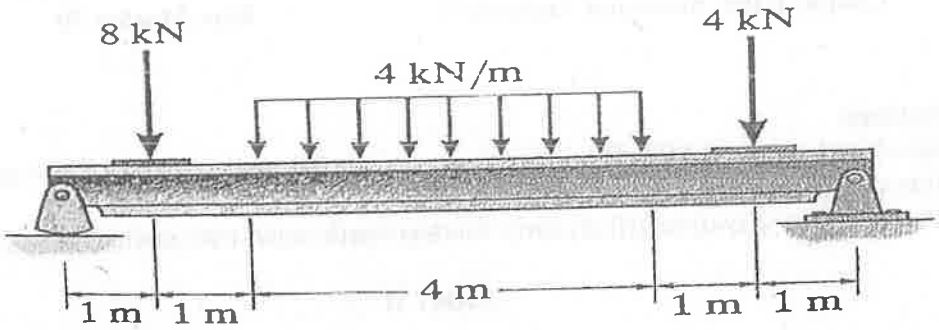
(a) What are the assumptions made in the theory of pure bending? Derive the flexure formula. (8)
(b) A cylindrical piece of steel 80 mm dia and 120 mm long is subjected to an axial compressive force of 50000 kg. Calculate the change in volume of the piece if bulk modulus = 1.7×10^6 kg/cm^2 and Poisson's ratio = 0.3. (6)

Unit-II

Question No.3

(a) Derive relationship between load, shear force and bending moment. (4)

(b) A simply supported beam carrying udl and two point loads is shown in figure below. Draw SFD and BMD for the beam and also determine the maximum bending moment. (10)

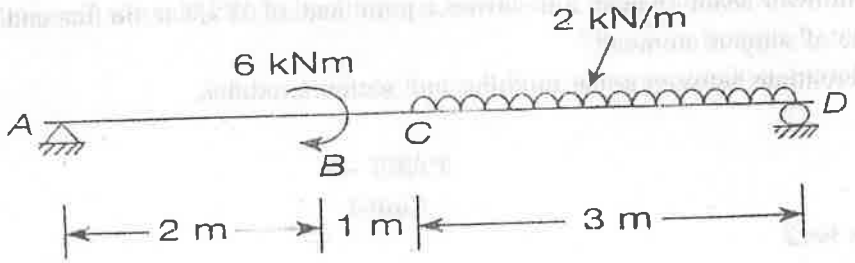


Or

Question No.3

(a) Draw S.F. and B.M. diagrams for a cantilever of length L carrying a uniformly distributed load w/ m length over its entire length. (4)

(b) Draw SFD and BMD for the beam given below. Also locate the point of contra flexure, if any. (10)



Unit-III

Question No.4

(a) A beam ABCD, 6 m long hinged at bend A and roller supported at end D is subjected to anti-clockwise couple of 10 kN m at point B and a point load of 10 kN at point C which are at a distance of 2 m and 4 m respectively from left end support A . Determine the deflection under the point load and slope at B, by taking EI as the flexural rigidity of the beam. Use Macaulay's method. (8)

(b) A cantilever carries a point load at the free end. Determine the deflection at the free end using conjugate beam method. (6)

Or

Question No.4

(a) A simply supported beam of length L carries a point load at the centre. The value of I for left half portion is twice than that of the right half. Find the deflection at the centre. Take E= constant. (8)

(b) What is moment area method? A simply supported beam of span length L carries a udl of intensity w/m over its entire length. Determine slope at supports and maximum deflection using moment area method.

(6)

Unit-IV

Question No.5

(a) Derive an expression of Euler's crippling load for a long column having both ends fixed.

(6)

(b) A solid shaft transmits 250 kW at 100 rpm. If the shear stress is not to exceed 75N/mm^2, what should be the diameter of the shaft? If this shaft is to be replaced by hollow shaft whose internal diameter shall be 0.6 times the outer diameter, determine the size and percentage saving in weight, maximum stresses being the same. (8)

Or

Question No.5

(a) A water main 80 cm diameter contains water at a pressure head of 120m. If the weight density of water is 9810 N/m^3, find the thickness of the metal required for the water main. Given the permissible stress as 25 N/mm^2. (5)

(b) For what length of a mild steel bar of 60mm diameter used as a strut, the Euler's theory is applicable, if the ultimate compressive strength is .33 kN/mm^2 and E=210 kN/mm^2, when one end of the strut is hinged and other is fixed. (4)

(c) Determine the ratio of buckling strengths of two columns one hollow and another one solid. Both are made of same material and have the same length, cross sectional area and end conditions. The internal Diameter of hollow column is half of its external diameter.

(5)

CENTRALUNIVERSITYOFHARYANA
End Term Examinations, Dec-2018

Programme	: B.Tech. (Civil Engineering)		
Semester	: Third	Session	: 2018-19
Course Title	: Building Construction and Materials	Max. Time	: 3 Hours
Course Code	: BT CE-305	Maximum Marks	: 70

Instructions:

1. Question Number **one (Part-I)** is compulsory and carries total 14 marks (Each sub Question carry two Marks.)
2. Question Number 2(two) to 5(five) carry fourteen marks each with internal choice.

Part-I

1. (a) How shallow foundation is different from deep foundations?
   (b) Define Ferrous Metals.
   (c) Define cavity wall?
   (d) How is hydraulic lime classified?
   (e) Define the term "reinforced brick work".
   (f) Define the term Terra-cotta tiles.
   (g) What is fire proofing of timbers?

2. (a) Enumerate different types of partition walls. Explain with sketches any one types of partition wall. [7]
   (b) What is the difference between pile foundation and pier foundation? Give the neat sketches. [7]

OR

2. (a) With neat sketches explain of Electrical Resistivity Method and Seismic Refraction method. [6]
   (b) Draw the plan and elevation of alternate course of $1\frac{1}{2}$ brick wall in (i) English bond (ii) Double Flemish bond. [8]

3. (a) Draw the neat sketches of king-post truss and queen-post truss. [8]
   (b) Describe different types of floor. [6]

OR

3. (a) Explain various methods used for damp proofing. What are the ill effects of dampness in building? [7]
   (b) Describe the damp proofing with neat sketches for (i) Foundations (ii) Floors. [7]

4. (a) Describe the initial and final setting time of cement? Describe rapid hardening Cement. [7]
   (b) Describe how bricks are classified? List the properties of first class bricks?

OR

4. (a) Name three geological classes into which rocks can be divided. Describe the process of rock formations. [7]
   (b) What are the ingredients of Portland cement? State the function and limits of each of them. [7]

5. (a) What are dry and wet rots? How are they caused and prevented? [7]
   (b) What is seasoning of timber? Describe methods of seasoning the timers. [7]

OR

5. (a) Write the properties and uses of stainless steel and high carbon steel. [7]
   (b) Discuss the uses of non-ferrous metals as building materials. [7]

Central University of Haryana
Third Semester Term End Examination Dec 2018
B.Tech. Programmes
Branch: Electrical Engineering, Computer Science Engineering

Course Code: BT EE 303 Max Time: 3 Hours
Course Title: Network Analysis and Synthesis

Instructions:
Question Number **one (PART-I)** is compulsory and carries total 14 marks (Each sub Question carries two Marks).
Question Numbers 2(two) to 5(five) carry fourteen marks each with internal choice.

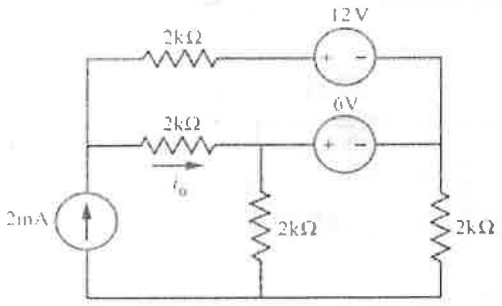
PART -I

Q. No.1

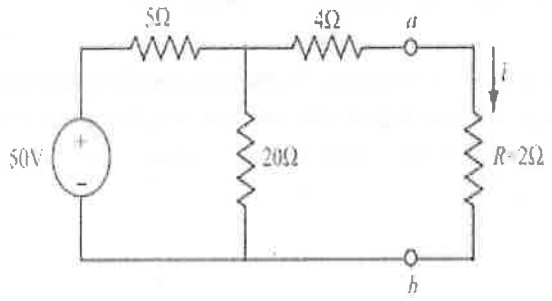
(a) Explain Maxwell's Loop Current Method.
(b) State and prove maximum power transfer theorem.
(c) Find the time constant of series R-C circuit having d.c. excitation.
(d) Explain the suitable example of DOT convention in coupled coils.
(e) Convert Z parameter to ABCD parameters.
(f) Explain concept of duality with example.
(g) Explain method for checking positive realness of function with example.

PART –II

Q.2. (a) Use superposition theorem to find I_0 in the circuit. (7)

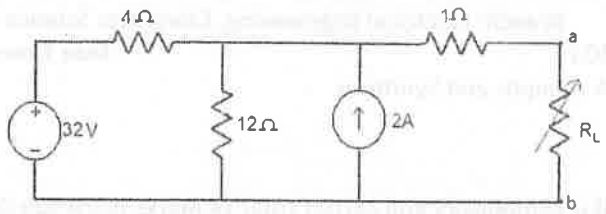


(b) Using the Thevenin's theorem, find the current i through R=2Ω (7)

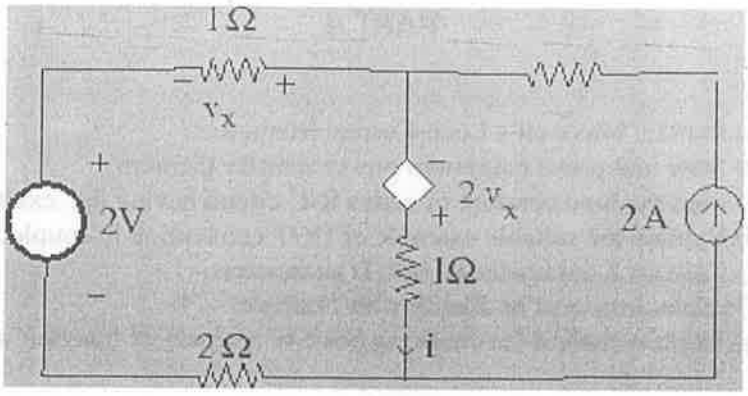


OR

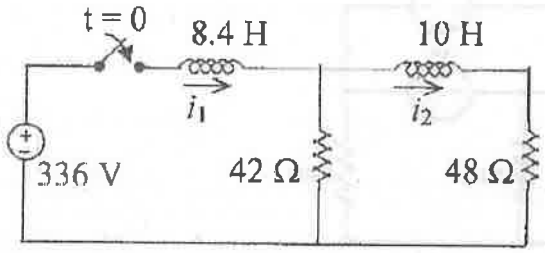
Q.2. (a) Find the Nortons's equivalent circuit of the circuit shown below, to left of the terminals ab. Then find the current through R = 16 ohm and 36 ohm. (7)



(b) Find current i in the network given below. (7)



Q.3. (a) Using Laplace transform, obtain the expression for the circuit shown below, when DC voltage source is applied suddenly. Assume that the initial energy stored in the circuit is zero. (8)

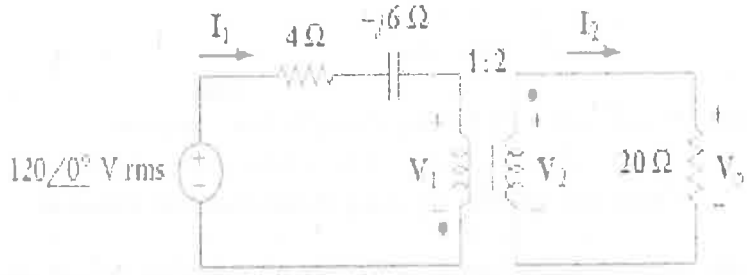


(b) A resistance R and 5μF capacitor are connected in series across a 100V d.c supply. Calculate the value of R such that the voltage across the capacitor becomes 50V in 5 sec. after the circuit is switched on. (6)

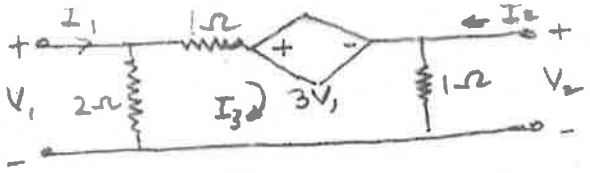
OR

Q.3. (a) The RLC circuit consists of resistance, inductance and capacitance in series with a 100V constant source when the switch is closed at t=0. Find the current transient when R=20Ω, L=0.05 H & C=20 μF. (7)

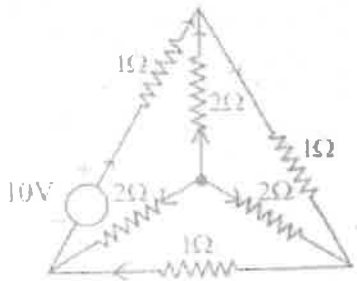
(b) For the ideal transformer circuit find (i) the source current I_1 (ii) output voltage V_0 (iii) complex power supplied by the source (7)



Q.4. (a) Determine Z and Y parameter (7)



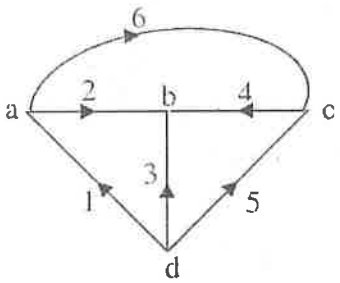
(b) For the network shown below, draw the graph and find incidence and tie – set matrices. (7)



OR

Q.4. (a) Find the interrelation between ABCD and h parameters. Two two-port networks are connected in parallel, find the parameters of combined network. (8)

(b) For the graph shown below, find incidence and cut set matrices. (6)



Q.5. (a) Obtain Foster-I & Foster-II form (8)

$$z(s)=\frac{s\left(s^2+4\right)}{\left(s^2+1\right)\left(s^2+9\right)}.$$

(b) Find Cauer-I form of given RC function: (6)

$$z_{RC}(s) = \frac{s^2 + 5s + 4}{s^3 + 7s^2 + 10s}$$

OR

Q.5. (a) For the network having characteristic equation: (7)

$D(s) = s^6 + 6s^5 + 12s^4 + 24s^3 + 35s^2 + 18s + 24 = 0$.

Check the stability by using Routh Hurwitz criterion

(b) Design a constant K- low pass filter having cut off frequency 2.5 kHz and design resistance Ro = 700 ohms. Also find frequency at which this filter produces attenuation of 19.1 dB. Find its characteristic impedances and phase constant at pass band and stop band. Also draw the π and T sections. (7)

Central University of Haryana
III semester UG Term End Examination, Dec 2018
B. Tech. Civil Engineering

Course Code: BT ENV 302 **Max Time: 3h**
Course Title: Environmental Studies **Max Marks: 70**

Instructions:
Question number one (PART-I) is compulsory and carries total 14 marks (Each sub question carries two marks).
Question number 2 (two) to 5 (five) carry fourteen marks each with internal choice.

Question 1. Write briefly/define

A. What is desertification?
B. Discuss the significance of food chains and food webs in an ecosystem.
C. Write a short note on Bhopal Gas Tragedy.
D. What is ecological succession?
E. Write a note on the conflicts over water in India?
F. Write a short note on Chipko movement.
G. Difference between decomposers and detritivores.

Question 2.

A. Define Environment (as per Environment Protection Act). Explain the multidisciplinary nature of environment. (5)
B. Define natural resources and differentiate renewable and non-renewable natural resources with examples (5).
C. How can you as an individual conserve different natural resources? (4)

Or

Question 2.

A. Define deforestation and enlist its causes. Discuss the uses and importance of forest resources. (7)
B. What is soil erosion? Discuss types of soil erosion caused by various factors and soil conservation methods. (7)

Question 3.

A. Enumerate various bio-geographical regions of India in brief in tabular form, indicating the types of species usually found in these regions, with special mention of their endemic species. (7)

B. What do you understand by the term 'biodiversity'? Discuss levels of biodiversity and the various uses to biodiversity. (7)

Or

Question 3.

A. Define ecosystem. Discuss the structure of an ecosystem in detail. (7)

B. Define ecological pyramids in an ecosystem and its types with suitable examples. (7)

Question 4.

A. Write a brief note on India's Wildlife (Protection) Act, 1972. (7)

B. Discuss various issues involved in the enforcement of environmental legislation. (7)

Or

Question 4.

A. Write a note on nuclear hazards and associated health risks in humans. (4)

B. Write a note on global warming and its effects. (4)

C. Briefly describe the sources, effects and control of air pollution. (6)

Question 5.

A. Briefly describe the environmental impacts of increasing population. (4)

B. Describe the family planning measures being used to check global population growth. (4)

C. Describe the role of Bishnoi's of Rajasthan in Environmental protection. (6)

Or

Question 5.

A. What do you understand by the population growth and population explosion? Enlist various reasons responsible for population explosion in India. (7)

B. What are the contributing factors of world population growth? Sketch a brief history of world population growth. (7)

Central University of Haryana
ODD Semester Term End Examination Dec 2018
B.Tech. Programmes
Branch: Civil Engineering

Course Code: BTFOM 301 Max Time: 3 hrs
Course Title: Fundamentals of Management

Instructions:
Question Number **one (PART-I)** is compulsory and carries total 14 marks (Each sub Question carries two Marks).
Question Numbers 2(two) to 5(five) carry fourteen marks each with internal choice.

PART -I

Q. No.1 Write short note on the following:
(a) Define Management.
(b) Decentralization.
(c) Production Control.
(d) Marketing Management.
(e) Capital Structure.
(f) Staffing.
(g) Working Capital.

PART –II

Q. No.2 "Management is as an art, science and profession" In the light of this statement explain yours views about it.
OR
Q. No.2 Explain in brief Henry Fayol's principles of management.

Q. No.3 What is production management? Explain the functions and responsibilities of production management.
OR
Q. No 3 What is inventory control? Explain significance and various techniques of inventory control.

Q. No.4 What do you mean by marketing research? Explain the importance and process of marketing research.
OR
Q. No .4 What is advertising? Describe in brief the functions and criticism of advertising.

Q. No.5 What is financial management? Discuss the scope, objectives and functions of financial management.
OR
Q. No.5 Explain the various sources of finance through which a company can raise its capital. Also describe the importance and disadvantages of these sources.

CENTRAL UNIVERSITY OF HARYANA

Term End Examinations, Nov/Dec 2018

Programme:	B. Tech	**Session:**	2018-19
Semester:	III	**Max. Time:**	3 Hours
Course Title:	Fundamental of Business Management	**Max. Marks:**	70
Course Code:	BT HS 310		

Instructions:

1. Question Number 1 has seven sub parts and students need to answer any four. Each sub part carries three and half marks.
2. Question Number 2 to 5 have three sub parts and students need to answer any two of each question. Each sub part carries seven marks.

Question No. 1

a) Describe in brief the nature and scope of personal function in organisations.

b) List out long term sources of funds and explain any one briefly.

c) What is segmentation in marketing? Explain briefly the bases of market segmentation.

d) Discuss the role of economics in engineering and technology.

e) Do you think *globalization* has helped to grow business in India? Comment.

f) What is the significance of price elasticity of demand?

g) Write short note on *psychological pricing.*

Question No. 2

a) How training and development are related to each other? Discuss with the help of examples taken from the industry.

b) What do you understand by the concept *Marketing Mix*? Discuss its constituents in detail by giving suitable examples.

c) Distinguish between marginal utility and total utility and prove that total utility is maximum when marginal utility is zero.

Question No. 3

a) Why is it important for a company to make its human resources into a competitive advantage? Comment and give your views.

b) What do you understand by product life cycle? Discuss its various stages with the help of a diagram.

c) How monopolistic competition is different from imperfect competition? Discuss.

Question No. 4

a) What do you understand by promotion mix in marketing? Discuss its various forms used by the marketers.

b) What is the essence of performance appraisal in organisations? Discuss 360 Degree form of performance appraisal.

c) What are the models and determinants of dividend decision? Discuss any two in detail with the help of examples.

Question No. 5

Write short note on the following in about 150 words each

a) Job description and job specification

b) Need of marketing environment analysis

c) Law of demand and supply

Central University of Haryana
ODD Semester Term End Examination Dec 2018
B.Tech. Programmes
Branch: Printing & Packaging Technology

Course Code: BTPPT304 **Max Time: 3 Hrs**
Course Title: Element of Packaging **Max Marks: 70**

Instructions:
Question Number **one (PART-I)** is compulsory and carries total 14 marks (Each sub Question carries two Marks).
Question Numbers 2(two) to 5(five) carry fourteen marks each with internal choice.

PART -I

Q. No.1

(a) A package is a silent sales mam. Justify this statement.
(b) With suitable example briefly explain Flexible, Rigid and Semi-Rigid packages
(c) What is cushioning materials? What is its importance in a package?
(d) What is the difference between Carton and Corrugated boxes?
(e) Explain briefly MAP & CAP.
(f) What are primary and secondary packaging? Brief with examples.
(g) What are the factors influencing the design of a package

PART –II

Q. No.2 List out the various classifications of Packaging. What are the functions and role of a Package?

OR

Q. No.2 What do you understand by Product life cycle? With a neat diagram explain Product Life Cycle Curve.

Q. No.3 Draw a neat diagram of Reverse Tuck End (RTE) package and brief each element.

OR

Q. No 3 What is Flexible package? What are the advantages of Flexible package over Rigid package? Explain with suitable examples.

Q. No.4 Explain with neat diagram the stages in preparation of corrugated board. What are the various types of Corrugation flutes available?

OR

Q. No .4 Explain briefly with suitable example Stretch wrapping and Shrink packaging techniques.

Q. No.5 What do you know about Aerosol containers? What are its types? With a neat diagram explain briefly any one. What are the advantages of Aerosol Packaging containers?

OR

Q. No.5 With suitable example explain resilient cushioning material and non- resilient cushioning materials?

Central University of Haryana
ODD Semester Term End Examination Dec 2018
D.Tech. Programmes
Branch: Packaging & Printing Technology

Course Code: BT PPT 301
Course Title: Introduction to Packaging & Printing
Semester:- Third

Max Time: 3 Hrs
Max Marks: 70

Instructions:
Question Number **one (PART-I)** is compulsory and carries total 14 marks (Each sub Question carries two Marks).
Question Numbers 2(two) to 5(five) carry fourteen marks each with internal choice.

PART -I

Q. No.1

(a) Briefly explain the activities of Prepress department in a Printing press?
(b) Post press requires 65% of floor space in a printing press? Justify.
(c) What are the various types of Digital printing technologies?
(d) What are the advantages of metal furniture over wooden furniture?
(e) How does the characteristics of substrates influence selection of printing process?
(f) How does Flexographic inks differ from offset inks?
(g) Screen Printing is also called as Porous printing? Justify.

PART –II

Q. No.2 Write a detailed note on sequential development on printing.

OR

Q. No.2 Discuss on various basic operations in printing.

Q. No.3 With neat diagram explain various types of printing technologies available in the market

OR

Q. No 3 What are the advantages of Flexographic printing over Letter press printing process? Explain the working of a four colour Flexo printing press with a neat diagram.

Q. No.4 What is the difference between Litho printing and offset printing process? Explain with neat diagram all the elements of an Offset printing unit

OR

Q. No .4 Why is the market of Flexo printing products increasing day by day? Briefly explain all the methods of Flexo plate making techniques.

Q. No.5 What do you understand by Gravure process of printing technology? Explain with a neat diagram. Explain in detail any one method of gravure cylinder preparation.

OR

Q. No.5 What are the advantages of Screen Printing technology? Briefly explain and two stencil preparation techniques.

Central University of Haryana
ODD Semester Term End Examination Dec 2018
B.Tech. Programmes
Branch: Packaging & Printing Technology

Course Code: BT PPT 301
Course Title: Introduction to Packaging & Printing
Semester:- Third

Max Time: 3 Hrs
Max Marks: 70

Instructions:
Question Number **one (PART-I)** is compulsory and carries total 14 marks (Each sub Question carries two Marks).
Question Numbers 2(two) to 5(five) carry fourteen marks each with internal choice.

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PART –II

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OR

Q. No.2 Discuss on various basic operations in printing.

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Central University of Haryana
Third Semester Term End Examination Dec 2018
B.Tech. Programmes
Branch: Electrical Engineering

Course Code: BT EE 307 **Max Time: 3 Hrs**
Course Title: Transmission and Distribution **Max Marks: 70**

Instructions:
Question Number **one (PART-I)** is compulsory and carries total 14 marks (Each sub Question carries two Marks).
Question Numbers 2(two) to 5(five) carry fourteen marks each with internal choice.

PART -I

Q. No.1

(a) Why power is transmitted at high voltage?
(b) Distinguish between self and mutual GMD.
(c) Define the string efficiency.
(d) Define the transposition of the lines. Why are transmission lines transposed?
(e) Define feeder and distributor.
(f)State the application of HVAC transmission.
(g) Define the term critical disruptive voltage.

PART –II

Q. No.2

a) Draw neat and clean layout of 11kV substation and explain the equipments in brief. (7)
b) Draw and explain the structure of electric power system indicating the voltage level in each transmission level. (7)

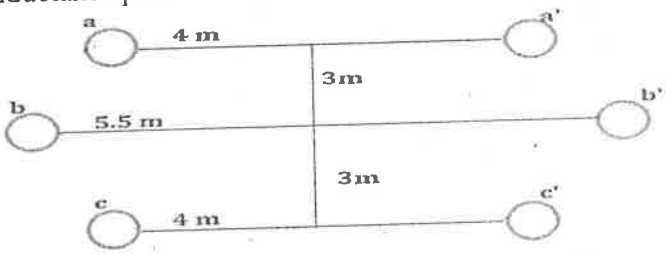
OR

Q. No.2

a) Explain the different type of distribution systems with the help of neat sketch. (7)
b) Explain the comparison between A.C. and D.C. system. Discuss the technical advantage of A.C system over D.C. system. (7)

Q. No.3

a) Derive the expression for the capacitance of a three phase unsymmetrically spaced transmission line. (6)
b) Determine the inductance per km of a double circuit three phase line as shown in figure.



The transmission line is transposed within each circuit and each circuit remains on its own side. The diameter of each conductor is 15mm. (8)

OR

Q. No 3

a) A short three phase transmission line has a series line impedance per phase of (20+j50) ohm. The line delivers a load of 50MW at 0.7 p.f. lag. Determine regulation of the line, system voltage is 220kV (8)

b) Explain the various methods of the voltage control in the transmission line. (6)

Q. No.4

a) An overhead line has the following data:
Span length 160m, Conductor diameter 0.95cm, Weight per unit length of conductor 0.65kg/meter. Ultimate stress 4250kg/cm^2, Wind pressure 40kg/m^2 of projected area, Factor of safety 5. Calculate sag. (8)

b) Explain the factors affecting the sag. (6)

OR

Q. No .4

a) Explain the potential distribution over a string of a suspension insulators. (6)

b) An insulator string consists of three units each having a safe working voltage of 15kV. The ratio of self-capacitance to the shunt capacitance is 6:1. Determine the line voltage and string efficiency. (8)

Q. No.5

a) State the classification of cables and discuss their general construction. (7)

b) What do you understand by the term grading of cable. Discuss in detail any one method of grading. (7)

OR

Q. No.5

a) Explain the formation of corona, critical voltage, corona losses and method of reducing the effect of corona. (7)

b) Derive the Expression for the voltage induced in communication line due to current in power line. (7)

Central University of Haryana
ODD Semester Term End Examination Dec 2018
B.Tech. Programmes
Branch: Computer science and Engineering

Course Code: BT CSE 303 **Max Time: 3hrs**
Course Title: Digital Electronics & Computer Organization **Max Marks:70**

Instructions:
Question Number **one (PART-I)** is compulsory and carries total 14 marks (Each sub Question carries two Marks).
Question Numbers 2(two) to 5(five) carry fourteen marks each with internal choice.

PART -I

Q. No.1

(a). Which gates are called as Universal gates? What are their advantages?
(b)What is a Logic gate? Describe any three logic gates.
(c) Design AND, OR and NOT gates using NAND gate.
(d) What is meant by K-Map?
(e) What is Full-Adder?
(f) Differentiate between SRAM and DRAM.
(g) Describe arithmetic pipelining.

PART –II

Q. No.2 What is an encoder? Differentiate between encoder and decoder with circuit diagram.

OR

Q. No.2(a) What is Hamming code? What is meant by error detection and correction?
(b) What are Multiplexer and Demultiplexer? Also discuss their application areas.

Q. No.3(a) What is a flip flop? Differentiate between S-R flip flop and J-K flip flop.
(b) What is ring counter? Explain Johnson ring counter in detail.

OR

Q. No 3(a) What is a Shift Register? Design a Shift- Register and explain its working.
(b)What is counter? Design 2-bit asynchronous up and down counter and explain it.

Q. No.4 What is instruction pipelining? Explain the advantages and difficulties in instruction pipelining.

OR

Q. No .4 Draw the detailed data path of a typical register based CPU? Illustrate its working.

Q. No.5Why we use cache memory? Also discuss the concept of address mapping in detail with suitable example.

OR

Q. No.5 What is memory hierarchy? What are the main memory parameters? Also discuss locality of reference.

Central University of Haryana
ODD Semester Term End Examination Dec 2018
B.Tech. Programmes
Branch: Computer Science Engineering 3rd Semester

Course Code: **BT CSE 301**
Course Title: **Data Structure using C**

Max Time: 3hrs
M. M.: 70 marks

Instructions:
Question Number **one (PART-I)** is compulsory and carries total 14 marks (Each sub Question carries two Marks).
Question Numbers 2(two) to 5(five) carry fourteen marks each with internal choice.

Part- I 7*2=14

1. Differentiate array and structure.
2. What is Big-Oh notation?
3. Differentiate BFS and DFS.
4. Differentiate stack and queue.
5. What is threaded binary tree?
6. Define recursion.
7. Give formula for address calculation in 2-D array.

Part- II

2. (a) What is an array? Explain algorithm for various operations performed on array.
   (b) What do you mean by complexity of algorithms? What are flow control statements? Discuss.

OR

(a) Write algorithm for Quick sort technique.
(b) Write algorithm/program for recursive and non-recursive binary search in array.

3. a. What is stack? Write algorithm for push, pop and status using array representation.
   b. Define linked list. Explain algorithm for deletion in single linked list for all cases.

OR

Convert X: A+ (B*C-(D/E-F)*G)*H into POSTFIX form showing stack status after every step in tabular form.

4. a. Write an algorithm for traversing a binary tree in preorder.
   b. Explain the algorithm for graph traversal technique (DFS) by taking suitable example.

OR

Create a B+ tree of order 5 for the following data arriving in sequence:
92,24,6,7,11,8,22,4,5,16,19,20,78

5. Insert the following elements in an AVL tree in alphabetical order:
   March, May, Nov, Aug, April, Jan, Dec, July, Feb, June, Oct, Sept.

OR

What is File? Explain the various file organization techniques.

CENTRALUNIVERSITYOFHARYANA

End Term Examinations.Dec-2018

Programme	: B. Tech. (Printing and Packaging Technology)		
Semester	: Third	Session	: 2018-19
Course Title	: Building Materials	Max. Time	: 3 Hours
Course Code	: BT CE-309	Maximum Marks	: 70

Instructions:

1. Question Number **one (Part-I)** is compulsory and carries total 14 marks (Each sub Question carry two Marks.)
2. Question Number 2(two) to 5(five) carry fourteen marks each with internal choice.

Part-I

1. (a) Write any two tests of bricks?
   (b) What is Pigment volume concentration?
   (c) What is pig iron?
   (d) Why hydraulic lime is unsuitable for plastering.
   (e) What is rapid hardening cement?
   (f) State the function of sand in mortar.
   (g) Write any two uses of "Sheeshum".

PART-II

2. (a) Describe the process of blasting rocks. State the precaution to be exercised. [7]
   (b) Write various uses of Terra-cotta tiles. How the quality of the tiles is determined? [7]

OR

2. (a) What are the tests to which a stone should be subjected before it is selected for building purposes? [7]
   (b) Describe the tests to which bricks may be put before using them for engineering purposes? [7]

3. (a) Describe briefly how lime is manufactured. Distinguish between quick, fat, hydraulic limes. [7] (b) Under what conditions will you recommended cement mortar over lime mortar for masonry. [7]

OR

3. (a) How is the cement classified? Describe the wet process of manufacturing of cement. [7]
   (b) What is the purpose of adding gypsum while manufacturing cement? [7]

4. (a) Write the differences of soft wood and hard wood. [7]

   (b) Describe various defects in timbers? [7]

OR

4. (a) Describe ferrous and non-ferrous metals? Give two examples and state their properties and uses? [7]

   (b) Specify some important uses of cast iron, wrought iron and mild steel? [7]

5. (a) State the functions of various ingredients of paints. [7]

   (b) Write main characteristics of good oil paints. [7] OR

5. (a) What are the objectives of varnishing a surface? Where will you prefer a varnish to a paint? [7]

   (b) What are the differences between paints, varnishes and distemper? [7]

Central University of Haryana
V Semester Term End Examination June 2018
B.Tech. Programme
Branch: Civil Engineering

Course Code:	BT CE 304	Max Time:	3 hours
Course Title:	Fluid Mechanics I	Max Marks:	70

Instructions:

Question Number **one (PART-I)** is compulsory and carries total 14 marks (Each sub Question carry two Marks).
Question Numbers 2(two) to 5(five) carry fourteen marks each with internal choice.

PART-I

1.1) What is the difference between adhesion and cohesion of fluid? 2
1.2) Show that streamlines and equipotential lines form a net of mutually perpendicular lines. 2
1.3) A gauge on the suction side of a pump shows a negative pressure of 0.285 bars. Express the pressure in terms of
   a. Pressure intensity KPa.
   b. m of water
   2
1.4) Given the choice between venture meter and orifice meter, for measurement of discharge in a pipe line. 2
1.5) What do you understand by aeration of nappe? 2
1.6) Derive similarity Reynolds model law. 2
1.7) List methods, which are used to control separation of boundary layer. 2

PART II
UNIT I

2(a) A cubical block of 20 cm edge and weight 20N is allowed to slide down a plane inclined at 20° to the horizontal on which there is thin film of oil of viscosity 0.22×10^{-3} Ns/m^2. What terminal velocity will be attained by the block if the thickness of oil film is estimated to be 0.025 mm? (7)

2(b) Define surface tension. Derive the relationship between surface tension and pressure inside a liquid droplet. (7)

OR

2(a) A stream function in a 2D flow is $\Psi = 2xy$, show that the flow is irrational and determine corresponding velocity potential. (2+5)

2(b) Explain in detail electrical analogy method for obtaining flow net. (7)

UNIT II

3(a) Derive a relation for single column manometer with neat sketch. What are sensitive Manometer? (7)

3(b) A vertical isosceles triangular with its vertex up has a base width of 2m and a height of 1.5 m. If the vertex of the gate of the gate is 1m below the free water surface, find the total pressure and position of center of pressure on one side of plate. (7)

OR

3(a) A wooden cylinder of diameter d and length 2d, floats in water with its axis vertical. Is the cylinder in stable equilibrium? Locate the metacentric with reference to water surface? Specific gravity of wood is 0.6.

(7)

3(b) Derive a relationship for total pressure and center pressure for a vertical submerged plain surface.

(7)

UNIT III

4(a) Derive Bernoulli's equation from the Euler's equation of motion. (7)

4(b) Rain fall over a catchment area of 26 sq km at the rate of 1mm/hr. The rain water flows over a weir with a clean length of 12 m constructed in 8 bays each 1.5 m long. Using Francis formula, find the head over weir crest. (7)

OR

4(a)An orifice meter is fitted in 30 cm diameter pipe has 15 cm diameter orifice plate. The pressure difference measured by a mercury oil differential manometer gives a reading of 50 cm. Find the discharge of oil of sp. Gravity of oil is 0.9 taking Cd of water as 0.64. (7)

4(b) Derive a relation for Borda's mouth piece running full. (7)

UNIT IV

5(a) Using Buckingham's π theorem, show that the velocity through a circular orifice is given by

$$V = \sqrt{2gh}\varphi\left[\frac{D}{H}, \frac{\mu}{\rho V H}\right] \quad (8)$$

5(b) Derive relation for displacement boundary layer and momentum thickness. (6)

OR

5(a) The velocity distribution in the boundary layer is given as

$$\frac{u}{U} = \left(\frac{3\eta}{2} - \frac{\eta^2}{2}\right)$$

Where $\eta = y/\delta$ Compute δ, θ and δ_E. (2+2+4)

5(b) The characteristics of a spillway of a low dam are to be studied by means of a geometrically similar constructed to a scale of 1/20 **(a)** If the max rate of flow in the prototype is 300 m^3/s. What will be the corresponding flow for the model? **(b)** At a certain point on the spillway the velocity is 8 m/s..What will be the corresponding velocity ion the model? **(c)** A hydraulic jump at the foot of the model spillway is 5 cm height. Find the height of the jump in the prototype.

(2+2+2)

Central University of Haryana
ODD Semester Reappear Examination Dec 2018
B.Tech. Programmes
Branch: Civil Engineering/EE/CSE

Course Code: BT PPT 307
Course Title: Packaging Legislations
Semester:- Third

Max Time: 3Hours
Max Marks: 70

Instructions:
Question Number **one (PART-I)** is compulsory and carries total 14 marks (Each sub Question carries two Marks).
Question Numbers 2(two) to 5(five) carry fourteen marks each with internal choice.

PART -I

Q. No.1

(a) What is AGMARK?
(b) Importance of Export Act.
(c) Standard Packages.
(d) What do you mean by UPR?
(e) Functions of BIS.
(f) Edible Oil Packaging Order.
(g) Any three Ministries involved in Packaging Legislations.

PART –II

Q. No.2 Describe in detail about Standard of Weights and Measure Act.

OR

Q. No.2 Explain Essential Commodities Act in detail.

Q. No.3 Explain about Standard Quality specifications for various products, symbols and units.

OR

Q. No3 Discuss on declarations for Interstate Trade and Commerce.

Q. No.4 Discuss Uniform Packaging and Labelling Regulation.

OR

Q. No. Describe about details of violations, offences and penalties under UPR act.

Q. No.5 What do you mean by PFA? Explain also Packaging requirement under PFA, Declaration and Labelling.

OR

Q. No.5 Write note on following:
I. Fruit Products Order
II. Meat Food Products Order

Central University of Haryana
ODD Semester Term End Examination Dec 2018
B.Tech. Programmes
Branch: Printing & Packaging

Course Code: BT PPT 303 **Max Time: 3 Hours**
Course Title: Package Design & Development **Max Marks: 70**
Semester:- Third

Instructions:
Question Number **one (PART-I)** is compulsory and carries total 14 marks (Each sub Question carries two Marks).
Question Numbers 2(two) to 5(five) carry fourteen marks each with internal choice.

PART -I

Q. No.1

(a) What is design?
(b) Principles of design.
(c) Use of colour scheme.
(d) What is rough layout?
(e) What is publicity?
(f) Use of DTP.
(g) What is house style?

PART –II

Q. No. 3

Write a detailed note on fundamentals of design.
or
Write a detailed note on principles of design.

Q. No. 3

Discuss on colour theory and also mention it's various applications.
or
Mention the various methods of type arrangement and discuss them in detail.

Q. No. 4

Write a detailed note on the role of design in sales promotion.
or
What is the role of printing planning? Also mention the importance of design management.

Q. No. 5

Discuss on various softwares used for designing in detail.
or
Differentiate good copy and bad copy. Also mention the importance of imposition schemes.

Central University of Haryana
ODD Semester Term End Examination Dec 2018
B.Tech. Programmes
Branch: CSE

Course Code: BT CSE 302 Max Time: 3 Hrs
Course Title: Discrete Structure Max Marks: 70

Instructions:
Question Number **one (PART-I)** is compulsory and carries total 14 marks (Each sub Question carries two Marks).
Question Numbers 2(two) to 5(five) carry fourteen marks each with internal choice.

PART -I

Q. No.1

(a) A computer company must hire 20 programmers to handle system programming jobs and 30 programmers for applications programming. Of those hired, 5 are expected to perform jobs of both types. How many programmers must be hired?

(b) If R be a relation in the set of integers Z defined by

$$R = \{(x, y): x \in Z, y \in Z, (x - y) \text{ is divisible by } 6\}.$$

(c) Show that $p \leftrightarrow q \equiv (p \rightarrow q) \wedge (q \rightarrow p)$.

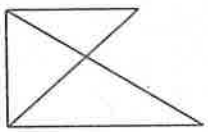
(d) How many numbers lying between 400 and 1000 can be formed with the digits 2, 3, 4, 5, 6 and 0, if repetition of digits is not allowed.

(e) Solve the recurrence relation

$a_n = 4(a_{n-1} - a_{n-2})$ with initial conditions $a_0 = a_1 = 1$.

(f) Explain cyclic group with the help of example.

(g) Find all the spanning trees of the graph shown below



PART –II

Q No.2 Let $A = \{1, 2, 3\}$ and $B = \{a, b, c, d\}$. Let R and S be the relations from A to B with the Boolean matrices

$$M_R = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 0 & 0 \\ 1 & 0 & 0 & 1 \end{bmatrix} \quad \text{and} \quad M_S = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 1 & 0 & 0 & 1 \\ 0 & 1 & 1 & 0 \end{bmatrix}$$

Find Boolean matrices for $(R \cap S)oR^{-1}$ and $RoR^{-1} \cap SoR^{-1}$.

OR

Q. No.2 Draw the Hasse diagrams for

(a) the poset (P(S), ⊆) where P(S) is the power set on S={a,b,c}.

(b) the poset (X, /) where X = {1, 2, 3, 4, 5, 6}.

Q. No.3 (a) Prove by mathematical induction that $6^{n+2} + 7^{2n+1}$ is divisible by 43 for each positive integer n.

(b) Show that $[(p \vee q) \wedge \sim (\sim p \wedge (\sim q \vee \sim r))] \vee (\sim p \wedge \sim q) \vee (\sim p \wedge \sim r)$ is a tautology by using laws of logic.

OR

Q. No 3 What is Pigeonhole principle? Show that if any five integers from 1 to 8 are chosen, then at least two of them will have a sum 9. Also show that if 9 books are to be kept in 4 shelves, there must be at least one shelf which contains at least 3 books.

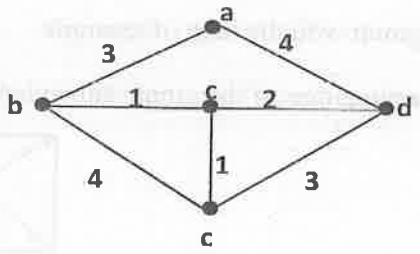
Q. No.4 What are generating functions? How is it used to solve recurrence relations? Solve the following recurrence relation by the method of generating functions

$$a_{n+2} - 2\,a_{n+1} + a_n = 2^n.$$

OR

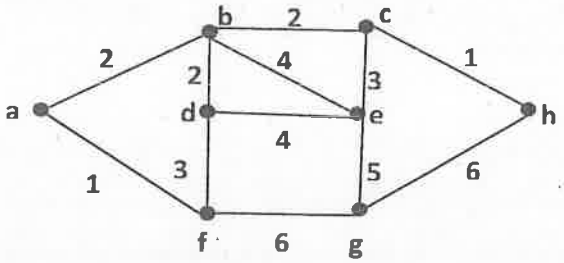
Q. No.4 State and prove the Lagrange's theorem. What about the converse of the Lagrange's theorem. Illustrate with two examples.

Q. No.5 Show how Kruskal's algorithm finds a minimal spanning tree for the following graph:



OR

Q. No.5 Use Dijkstra's algorithm to find the shortest path between the **a** and **h** vertices in the given weighted graph



Central University of Haryana
ODD Semester Term End Examination Dec 2018
B.Tech. Programmes
Branch: Computer Science Engineering

Course Code: BT CSE 304 Max Time: 3 hrs
Course Title: Fundamentals of Management

Instructions:
Question Number **one (PART-I)** is compulsory and carries total 14 marks (Each sub Question carries two Marks).
Question Numbers 2(two) to 5(five) carry fourteen marks each with internal choice.

PART -I

Q. No.1 Write short note on the following:

(a) Define Management.
(b) Decentralization.
(c) Production Control.
(d) Marketing Management.
(e) Capital Structure.
(f) Staffing.
(g) Working Capital.

PART –II

Q. No.2 "Management is as an art, science and profession" In the light of this statement explain yours views about it.
OR
Q. No.2 Explain in brief Henry Fayol's principles of management.

Q. No.3 What is production management? Explain the functions and responsibilities of production management.
OR
Q. No 3 What is inventory control? What is its significance? Explain various techniques of inventory control.

Q. No.4 What do you mean by marketing research? Explain the importance and process of marketing research.
OR
Q. No .4 What is advertising? Describe in brief the functions and criticism of advertising.

Q. No.5 What is financial management? Discuss the scope, objectives and functions of financial management.
OR
Q. No.5 Explain the various sources of finance through which a company can raise its capital. Also describe the importance and disadvantages of these sources.

Central University of Haryana
ODD Semester Term End Examination Dec 2018
B.Tech. Programmes
Branch: Printing & Packaging Technology

Course Code: BT PPT 304
Course Title: Element of Packaging
Semester:- Third

Max Time: 3 Hrs
Max Marks: 70

Instructions:
Question Number **one (PART-I)** is compulsory and carries total 14 marks (Each sub Question carries two Marks).
Question Numbers 2(two) to 5(five) carry fourteen marks each with internal choice.

PART -I

Q. No.1

(a) A package is a silent sales mam. Justify this statement.
(b) With suitable example briefly explain Flexible, Rigid and Semi-Rigid packages
(c) What is cushioning materials? What is its importance in a package?
(d) What is the difference between Carton and Corrugated boxes?
(e) Explain briefly MAP & CAP.
(f) What are primary and secondary packaging? Brief with examples.
(g) What are the factors influencing the design of a package

PART –II

Q. No.2 List out the various classifications of Packaging. What are the functions and role of a Package?

OR

Q. No.2 What do you understand by Product life cycle? With a neat diagram explain Product Life Cycle Curve.

Q. No.3 Draw a neat diagram of Reverse Tuck End (RTE) package and brief each element.

OR

Q. No 3 What is Flexible package? What are the advantages of Flexible package over Rigid package? Explain with suitable examples.

Q. No.4 Explain with neat diagram the stages in preparation of corrugated board. What are the various types of Corrugation flutes available?

OR

Q. No .4 Explain briefly with suitable example Stretch wrapping and Shrink packaging techniques.

Q. No.5 What do you know about Aerosol containers? What are its types? With a neat diagram explain briefly any one. What are the advantages of Aerosol Packaging containers?

OR

Q. No.5 With suitable example explain resilient cushioning material and non- resilient cushioning materials?