

**FACULTY OF ENGINEERING****B.E. (Civil) III – Semester (CBCS) (Suppl.) Examination, May / June 2018****Subject: Surveying – I****Time: 3 Hours****Max.Marks: 70****Note: Answer all questions from Part A & any five questions from Part B.****PART – A (20 Marks)**

- 1 Differentiate between prismatic compass and surveyors compass. (2)
- 2 Who is Follower and Leader? (1)
- 3 What are the different types of survey stations are there. Discuss them in brief? (3)
- 4 Define the terms: Bearing and Index Sketch. (2)
- 5 Define the terms: Local Attraction and Magnetic Declination. (2)
- 6 Define orientation of plane table. (1)
- 7 What is a Well Conditioned Triangle? (2)
- 8 What is Bench mark? What are the different types of Bench Marks? (2)
- 9 List any three uses of Contours. (2)
- 10 When the bubble is at the centre, the reading on the staff, 100m from the level is 2.550m. The bubble is then deviated by five divisions and the staff reading is 2.500m.if the length of one division of the staff is 2mm, calculate the radius of curvature of the bubble tube and the angular value of one division of the bubble. (3)

**PART – B (50 Marks)**

- 11 a) How many types of chains are there? Explain them in detail with their advantages. (3)
- b) The area of the plan of an old survey plotted to a scale of 20 meters to 1 cm measures now as 125.6 sq.cm as found by planimetre.The plan is found to have shrunk, so that a line originally 10 cm long now measures 9.6 cm only. There was also a note on the plan that the 20 m chain used was 6 cm too short. Find the true area of the field. (7)
- 12 a) Draw a neat sketch of Prismatic Compass showing its parts. Explain the function of each part. (5)
- b) The following are the bearings of the lines of a traverse ABCDEA, with a compass of an area where local attraction was suspected. Find the correct bearings of the lines. (5)

| Line | Fore bearing | Back bearing |
|------|--------------|--------------|
| AB   | 191°45'      | 13°0'        |
| BC   | 39°30'       | 222°30'      |
| CD   | 22°15'       | 200°30'      |
| DE   | 242°45'      | 62°45'       |
| EA   | 330°15'      | 147°45'      |

13 What is Three – point problem? Describe how it is solved. (10)

14 a) A man at a position 10 m above mean sea level observes the peak of a hill. The distance between the man and the hill is 80 km. Find the height. (5)

b) The following staff readings 1.185, 2.605, 1.925, 2.305, 1.155, 0.864, 1.105, 1.685, 1.215, 1.545 and 0.605. A is the B.M of R.L185.685m. Find R.L's of the other points by H.I method. Point 'A' readings 2.604, 0.864 and 1.215. (5)

15 a) State the characteristics of a contour. (3)

b) A railway embankment is 12 m wide. The ground is level in the direction of traverse to the centre line. Calculate the volume contained in a 100 m length by Trapezoidal rule and Prismoidal rule. (7)

16 a) The following observations were made with a dumpy level.

| Instrument at | Staff Reading at |       | Remark              |
|---------------|------------------|-------|---------------------|
|               | A                | B     |                     |
| A             | 1.725            | 2.245 | R.L of A = 450.00 m |
| B             | 2.145            | 3.045 |                     |

Find the R.L.of B. (5)

b) Explain with a neat sketch, the principle and use of an optical square and open cross staff. (5)

17 Write in detail on: (10)

- Obstacles in chaining.
- Errors in plane table survey.
- Characteristics of Contour Lines.

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**FACULTY OF ENGINEERING****B.E III-Semester (CBCS) (EE/Inst./M/P/CSE) (Suppl.) Examination, May/June 2018****Sub: Environmental Sciences****TIME: 3 Hours****Max. Marks: 70****Note: Answer All Questions from Part – A. Any Five Questions From Part–B.****PART–A (20 Marks)**

1. Distinguish between water logging and salinity. 2
2. Mention few control measures of flood. 2
3. State the scope of ecosystem. 2
4. Write the characteristics of forest ecosystem. 2
5. Distinguish between In-situ and Ex-situ conservation of biodiversity. 2
6. Give reason why India is considered as mega biodiversity nation. 2
7. How do you control soil pollution with pesticides and garbage? 2
8. What are the issues involved in enforcement of environmental legislation? 2
9. Write the limitations of rain water harvesting. 2
10. State the principles of disaster mitigation. 2

**PART–B (50 Marks)**

11. a) List out indirect solar energy resources. Explain any two with advantages and disadvantages. 5  
b) Write the control measures of floods and draughts. 5
12. a) Explain the single channel energy flow model with neat diagram. 5  
b) Describe the components of fresh water ecosystem. 5
13. a) Define hotspots. Explain two hotspots found in India. 5  
b) Distinguish between endangered and endemic species with examples. 5
14. a) Write down the working procedure for electrostatic precipitator and cyclone separator for air pollution control. 5  
b) Discuss the salient features of wild life conservation act and forest conservation act. 5
15. a) How do you harvest rain water in building? Justify your answer. 5  
b) Explain disaster management cycle. 5
16. a) Mention the signs of global warming. 5  
b) Mention the steps to be taken for control of noise pollution. 5
17. a) Write a note on effect of modern agriculture on soil. 5  
b) What are the measures to be taken to protect natural ecosystem. 5

**FACULTY OF ENGINEERING****BE 2/4 (Civil) II-Sem (Backlog) Examination, May / June 2018****Subject: Mechanical Technology (Part-B)****Time: 1½ Hours****Max. Marks: 37**

Note: Answer ALL Questions From Part-A any THREE Questions From Part-B.

**PART - A. (13 Marks)**

1. State Earth Compactor features.
2. What is a Whirler Crane? application
3. Write uses of Bucket Elevator.
4. Explain crusher's jaw Application
5. Write the uses of Hoist Winch in construction.

**PART - B. (24 Marks)**

6. (a) Differentiate between Belt Conveyor and Screw Conveyor.  
(b) Write the advantages and disadvantages of Apron Conveyor.
7. (a) Explain Hammer and Roll Crusher with neat Sketches.  
(b) Write note on Concrete Mixer and Concrete Pump.
8. Write the working principle and uses of Reciprocating Air Compressor with neat sketch.
9. (a) Explain Shaking and Vibrating Screen.  
(b) Explain Differential and worm geared chain hoists.
10. (a) Write advantages and disadvantages of Aerial Ropeway and Rock Drill.  
(b) Differentiate between Pneumatic Jack Hammer and Paving Breaker.

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**FACULTY OF ENGINEERING****B.E. 2/4 (EEE) II-Semester (Backlog) Examination, May / June 2018****Subject: Electrical Machines-I****Time: 3 hours****Max. Marks: 75**

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.

**PART-A (25 Marks)**

1. Define field energy and co-energy.
2. Differentiate singly and multiple excited system.
3. What is meant by dummy coils and for what purpose these coils are used?
4. Define armature reaction in dc generator?
5. State the different types of dc motors with their applications.
6. What is speed regulation?
7. Why Swinburne's test cannot be performed on dc series machines?
8. Why do copper losses occur in a dc machine?
9. Define All-day efficiency of a transformer?
10. It is desired to have a 4.13 mWb maximum core flux in a transformer at 110V and 50Hz. Determine the required number of turns in the primary.

**PART-B (50 Marks)**

11. Explain the following terms with neat diagrams and necessary equations: [10]
  - (a) Principles of Electro-mechanical energy conversion.
  - (b) Energy in magnetic system.
  - (c) Field energy and mechanical force.
12. (a) Explain about characteristics of shunt wound DC generators. [5]
  - (b) A 75 KW, 250 V compound dc generator has the following data  $R_a=0.04$ ,  $R_{se}=0.004$ ,  $R_f=100$ , brush contact drop,  $V_b=2V$  (1 volt each brush). Compare the generator induced emf when fully loaded in
    - i) long shunt compound [5]
    - ii) short shunt compound. [5]
- 13 Explain construction and working principle of DC motor. [10]
14. (a) What is meant by speed control? Explain with circuit diagram a speed control scheme of a dc shunt motor by varying field flux. [5]
  - (b) A 230V dc shunt motor runs at 800rpm and takes armature current of 50A. Find the resistance to be added to the field circuit to increase speed to 1000 rpm at an armature current of 80A. Assume flux proportional to field current. Armature resistance = 0.15 and field winding resistance = 250 . [5]
15. (a) Why is starting current high in a dc motor ? Explain the Application of motors [5]
  - (b) A 10 kW, 200V, 1200 rpm series dc generator has armature resistance of 0.1 , field winding resistance of 0.3 . the frictional and winding loss of the machine is 200 W and brush contact drop is 1 volt per brush. Find the efficiency of the machine and the load current at which this machine has maximum efficiency. [5]

16. Explain the following: (i) Swinburne's test (ii) Hopkinson test for dc machine and also mention their importances. [10]
- 17.(a) Explain the E.M.F equation of a transformer. [5]
- (b) A single phase, 50Hz transformer has 80 turns on the primary winding and 400 turns on the secondary winding. The net cross – sectional area of the core is  $200 \text{ cm}^2$ . If the primary winding is connected to a 240V, 50Hz supply, determine:  
(i) the e.m.f induced in the secondary winding. (ii) the maximum value of the flux density in the core. [5]

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**FACULTY OF ENGINEERING**  
**B.E. 2/4 (Inst.) II - Semester (Backlog) Examination, May 2018**

**Subject: Electrical Machines**

**Time : 3 Hours**

**Max. Marks: 75**

**Note: Answer all questions from Part-A & any five questions from Part-B.**

**PART – A (25 Marks)**

- 1 Distinguish between long shunt and short shunt compound DC machines. [3]
- 2 What are the different losses in DC machines? [2]
- 3 Distribution transformer have core losses \_\_\_\_\_ than compared to full load copper losses. [2]
- 4 What is the purpose of using oil in the transformer? Explain. [3]
- 5 Define the coil span or pitch factor of synchronous machine. Write the formula. [3]
- 6 What are the different methods of starting of a synchronous machine? [3]
- 7 A three phase, 4-pole , 50 Hz, induction motor has a rotor resistance of 0.020 ohm/phase and standstill reactance of 0.5 ohm/phase. Calculate the speed at which the maximum torque is developed. [3]
- 8 What are the various methods of starting of a three phase induction motor. [2]
- 9 Draw the simple circuit diagram of a shaded pole motor. [2]
- 10 What are the different types of a single phase induction motors based on starting methods. [2]

**PART- B (50 Marks)**

- 11 (a) Explain the operation of a three point starter used in DC motor. [5]  
 (b) 100 kW , 220 V dc shunt generator has the following data: armature resistance = 0.1 ohm; mechanical loss = 5 kW; Iron losses = 5 kW; shunt field resistance = 220 ohm; Brush contact drop = 1 V per brush; stray losses are 1 % of output; Find the efficiency at full load. [5]
- 12 (a) Derive the equivalent circuit of a single phase transformer with the help of equations. [7]  
 (b) Draw the transformer phasor diagram at unity power factor using ON load. [3]
- 13 (a) Draw the phasor diagram of cylindrical rotor alternator at (a) lagging power factor and (b) leading power factor with the help of its equivalent circuit. Explain. [5]  
 (b) A four pole, three phase , 50 Hz star connected alternator has a single layer winding in 36 slots with 30 conductors per slot. The flux per pole is 0.05 wb and winding is full pitched. Find the synchronous speed and line voltage. [5]

..2..

- 14 (a) A three phase , 50 Hz , 500 V induction motor develops 20 BHP at a slip of 4%. The mechanical losses are 1 HP. calculate the efficiency .if the stator loss is 1000W. [5]  
(b) Derive the expression for a maximum torque of a three phase induction motor.[5]
- 15 (a) What is the difference between capacitor start motor and capacitor start-capacitor run motor. [5]  
(b) Explain the principal of operation of a stepper motor. [5]
- 16 (a) Explain the speed-torque characteristics of a (a) DC shunt motor and (b) DC series motor. [5]  
(b) A three phase synchronous motor of 1000 kW and 6.6kv has synchronous reactance of 10 ohm per phase. The efficiency of the motor is 90%. Neglecting armature resistance , determine the minimum current and corresponding induced EMF at full load. [5]
- 17 (a) Explain the speed control of three phase induction motor using pole changing methods. [5]  
(b) Discuss about synchronous condenser. [5]

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**FACULTY OF ENGINEERING****B.E. II/IV (M/P/A.E) II Semester (Backlog) Examination, May/June 2018****Subject: Kinematics of Machines****Time: 3 Hours****Max. Marks: 75****Note: Answer all questions from Part A any Five questions from Part B.****PART – A (25 Marks)**

1. Differentiate mechanism and machine 3
2. What is meant by mobility? Explain Grubler's criterion of finding out mobility 3
3. State Kennedy's theorem 3
4. Define (i) Body centrode (ii) Space centrode 3
5. State laws of friction 3
6. Explain the phenomenon of slip and creep in belt-drive 2
7. Name different types of follower motions 2
8. Define the following cam terminology (i) Base Circle (ii) Pressure angle 2
9. Sketch and explain epi-cycle gear train 2
10. What is backlash of gears 2

**PART – B (10x5=50 Marks)**

11. With neat sketches explain inversion of Quadratic cyclic chain. 10
12. The crank of a slider crank mechanism rotates clock-wise at a uniform speed of 300 rpm. The crank is 150 mm. connecting rod is 600 mm long determine (a) velocity and acceleration of the piston connecting rod, at a crank angle of  $45^\circ$  from Inner Dead Centre position. (b) Angular velocity and angular acceleration of the connecting rod, at a crank angle of  $45^\circ$  from Inner Dead Centre position. 10
13. (a) The following data relate to a screw-Jack is: pitch of the threaded screw = 8 mm., Diameter of the threaded screw = 40 mm., Coefficient of friction between screw and nut = 0.1; Load = 20kN; Assuming that the load rotates with the screw, determine (i) The ratio of torque required to raise and lower the load. (ii) the efficiency of screw jack. 5
- (b) A conical collar with angle of cone as  $100^\circ$ , supports a load of 18kN. The external radius is 2.5 times the internal radius. The shaft rotates at 150 rpm. If the intensity of pressure is to be  $300 \text{ kN/m}^2$  and Coefficient of friction as 0.05, What is the power lost in working against the friction. 5

**Cont..2**

14. The following data rotate to a cam profile in which the follows moves with uniform acceleration and deceleration during ascent and descent. Minimum radius of the cam = 25 mm; Roller radius = 7.5 mm; lift = 28 mm; off-set of follower axis – 12mm towards right; Angle of ascent =  $60^\circ$ , Angle of descent =  $90^\circ$ ; Angle of dwell between ascent and descent =  $45^\circ$ ; speed of cam = 200 rpm. Draw the profile of the cam and determine the maximum velocity and the uniform acceleration of the follower during outstroke and the return stroke.

10

15. a) Define and prove the law of gearing.

5

b) The Annulus A in the gear shown in Fig.(i) rotates at 300 rpm about the axis of fixed wheel-S which has 80 teeth. The three armed spider is driven at 180 rpm. Determine the number of teeth require on the wheel P.

5

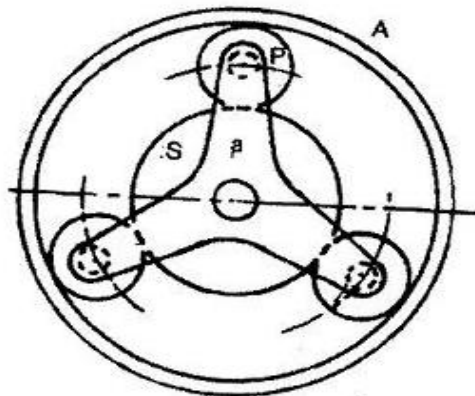


Fig - (1)

16. Write a short notes on any two of the following:

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- Self locking and self energised brakes
- Ackurman's steering gear mechanism.
- Reverted gear train.

17. Write a short note two of the following.

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- Torsion Dynamometer
- Hart straight line motion mechanism.
- Compare involute and cycloidal gear profiles.

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**FACULTY OF INFORMATICS****B.E. 2/4 (I.T) II – Semester (Backlog) Examination, May/June 2018****Subject: Data Communications****Time: 3 Hours****Max. Marks: 75****Note: Answer all questions from Part A & Five questions from Part B.****PART – A (25 Marks)**

- 1) Define Protocol and what is the need of protocol architecture in Data communications. 3
- 2) List out the types of transmission impairments. 2
- 3) Differentiate Asynchronous and Synchronous transmission 3
- 4) Encode the bit stream 101010001 using 2
  - a) NRX-L
  - b) NRZ-I
- 5) Write the differences between FSK & Ask 3
- 6) Explain the 3 types of control frames in HDLC. 3
- 7) Give ATM cell format. 2
- 8) Differentiate FDN and TDM 2
- 9) Write short notes on ADSL. 2
- 10) Write about Bluetooth Piconet and Scatternet 3

**PART – B (50 Marks)**

11. a) Explain the difference between TCP/IP and OSI reference model. 5
  - b) Differentiate PCM and DM 5
12. What is CRC? And explain how errors can be detected using CRC with an example. 10
13. a) Define switching Technique? And Explain about Circuit Switching and Packet Switching. 6
  - b) Write short notes on Frame relay 4
14. a) What is CSMA/CD? Explain the function of MAC sub layer in Ethernet with MAC frame format. 6
  - b) Explain different types of Ethernet Topologies and transmission media. 4
15. a) Explain IEEE 802.11 architecture and services. 6
  - b) Write Short notes on Zigbee 4
16. a) What is multiplexing? And Explain how synchronous TDM is different from statistical TDM. 6
  - b) Write short notes on ATM logical connection. 4
17. Explain the following (5+5)
  - a) Bluetooth layers
  - b) Generations of Cellular networks.

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## FACULTY OF ENGINEERING

B.E. 2/4 (ECE) II-Semester (Backlog) Examination, May / June 2018

Subject: Signal Analysis and Transform Techniques

Time: 3 Hours

Max. Marks: 75

Note: Answer all questions from Part A and any five questions from Part B.

### PART-A (25 Marks)

1. Sketch the following signals.
  - a.  $[2 U(t+2) - 2 U(t-3)]$
  - b.  $[r(-t) U(t+2)]$
2. Distinguish between Energy vs Power Signals? (2)
3. Show that the Complex exponential sequence  $x(n) = \exp(j\omega_0 n)$  is periodic if and only if  $(\omega_0/2\pi)$  is a rational number (3)
4. Discuss how an unknown function  $x(t)$  can be expressed using infinite mutually Orthogonal functions. (2)
5. State and prove Time differentiation property of Fourier Series. (3)
6. State Dirichlet's conditions. (2)
7. State and prove initial and final value theorems for Laplace Transform? (3)
8. Prove that the Auto Correlation function of an aperiodic power signal is  $R(\tau) = \exp(-\tau^2/2)$ . (2)
9. State properties of Region of Convergence in Z-domain? (3)
10. State and prove discrete convolution theorem? (2)

### Part-B (5 X 10 =50 Marks)

- 11 a) State and prove all five properties of continuous time Impulse function? (4)
- b) Determine the following signals are periodic or not? (6)
  - (1).  $\cos 4n$ ; (2)  $\sin(5\pi n)$ ; (3)  $\exp(j\pi/2)n$ ; (4)  $\cos[(\pi/2) + 0.3n]$
12. a) Distinguish between analogy for Signals and Vectors? (5)
- b) Obtain Fourier Transform of signal shown in figure-a below (5)

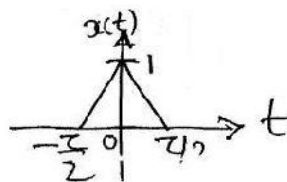
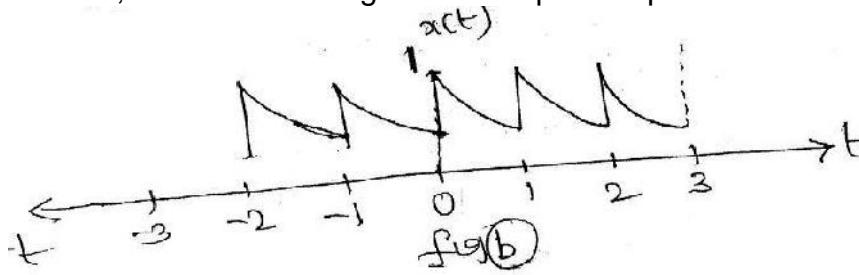


Fig (a)

-2-

- 13 a) Find the Fourier series for the signal  $x(t) = \exp(-t)$  with  $T = 1$  sec. as shown in figure-b below; also obtain magnitude and phase spectrum and draw it. (6)



- b) Obtain Laplace Transforms of the following signals: (4)  
 $x_1(t) = \exp(-at)$ ,  $\sinh(wt) U(t)$  and  $x_2(t) = t^2 U(t)$  ?
- 14 a) Find the signal  $x(t)$  that corresponds to the Laplace transform  $X(s)$  given below and Plot ROC too?  $X(s) = \frac{(3s^2 + 22s + 27)}{(s^2 + 3s + 2)(s^2 + 2s + 5)}$  (5)
- b. Using Convolution Theorem of Laplace Transform, find  $y(t) = [x_1(t) * x_2(t)]$ ;
- i)  $x_1(t) = \sin 3t U(t)$  and  $x_2(t) = \cos 2t U(t)$ ;
- ii)  $x_1(t) = t u(t)$  and  $x_2(t) = t u(t)$  (5)
- 15 a) A Signal  $x(t)$  is given by  $\sin w_0 t$ ; find its  $R(\cdot)$  and Energy density spectral (5)
- b). Find the Auto Correlation of the signal  $x(t) = A \sin(w_0 t + \theta)$  (5)
- 16 a). Determine the Z-transforms of the following Sequences: (4)  
 $U(n) - U(n-4)$  ;  $U(-n) - U(-n-3)$
- b) A Causal system is represented by ;  
 $H(z) = \left( \frac{z+2}{2z^2 - 3z + 4} \right)$  find difference equation and frequency response of system (6)
- 17.a) State and prove Auto Correlation function properties of  $R_{xx}(\tau)$  (5)
- b) Distinguish between S-plane to Z-plane mapping? (5)

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## FACULTY OF ENGINEERING

B.E. 2/4 (Civil) II – Semester (Backlog) Examination, May/June 2018

Subject: Electrical Technology(Part A)

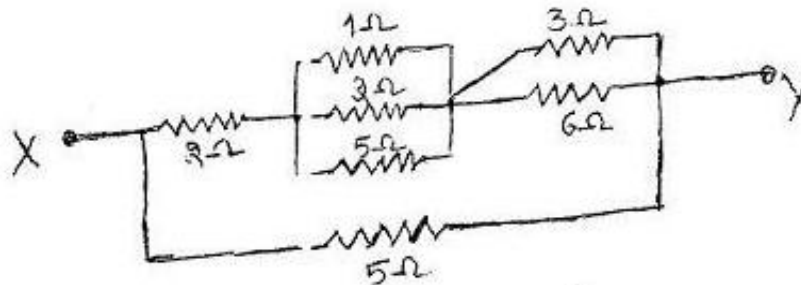
Time: 1<sup>1</sup>/<sub>2</sub> Hours

Max. Marks: 38

Note: Answer all questions from Part A and three questions from Part B.

### PART – A (14 Marks)

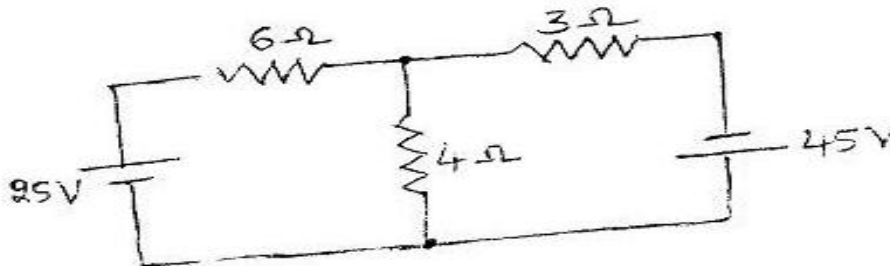
- 1) Find the equivalent resistance across, x-y for the circuit shown below. 3



- 2) State and Explain Kirchoff's laws. 2
- 3) What is transformer? How does it transfer electric power from one circuit to another? 2
- 4) Define Synchronous speed and slip. 2
- 5) Define coefficient of utilization, Depreciation factor. 2
- 6) What are the properties of ideal transformer. 3

### PART – B (24 Marks)

7. a) Derive relation between line and phase voltages and currents in a star connection. 4
- b) Find the current in various resistors in the circuit, using Kirchoff's laws for the circuit shown below. 4



- 8) a) Explain O.C. and S.C tests on a single phase transformer. 4
- b) The net cross-sectional area of the core of 400/3000v; 50 hz transformer is 600cm<sup>2</sup>. If the maximum flux-density in the Core is 1.3 wb/m<sup>2</sup>, find the number of turns on the primary and secondary.

Contd..2....

9. a) Explain torque-slip characteristics of three phase Induction motor. 4
- b) A 2-pole, 3-phase, 50 Hz induction motor is running on no-load with a slip of 4%. Calculate (i) The synchronous speed, (ii) Speed of the motor, (iii) Rotor frequency. 4
10. a) Prove that average power consumption in pure inductor is zero when a.c. voltage is applied. 4
- b) Three similar coils are star connected to a 3-phase, 400V, 50 Hz supply. If the inductance and resistance of each coil are 38.2 mH and  $16 \Omega$  respectively, determine (i) Line current, (ii) Power factor and (iii) Power Consumed. 4
11. a) Discuss laws of illumination and its limitations in actual practice. 4
- b) In a 100KVA transformer, the iron loss is 1.2 kW and full-load copper loss in 2kW. If the load p.f. is 0.8 lagging, find the efficiency at (i) Full load (ii) half of full-load. 4

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**FACULTY OF ENGINEERING**  
**B.E. 2/4 (CSE) II - Semester (Backlog) Examination, May/June 2018**

**Subject : Principles of Programming Languages**

**Time : 3 Hours**

**Max. Marks: 75**

**Time: 3 Hours**

**Max. Marks: 75**

**Note: Answer all questions from part – A & Any five questions from part - B**

**Paper – A (25 Marks)**

1. Differentiate between Hybrid Interpretation and Pure Interpretation? [2]
2. Write BNF notation for if-else statements. [3]
3. What is the referencing environment of a statement? [2]
4. What is structure type equivalence? Give example. [2]
5. Discuss the differences between logically controlled loops and counter controlled loops. [3]
6. What is a Co- routine? Explain. [3]
7. Explain the scope and life time of a variable. [2]
8. What advantages do monitors have over semaphores? [3]
9. What is higher order function? [2]
10. What are the data types supported in Python? [3]

**PART – B (5x10 = 50 Marks)**

11. a) Give some reasons why computer scientists and professional software developers should study general concepts of language design and evaluation. [5]
- b) Explain the process of Computation. [5]
12. a) Describe the basic concept of denotational semantics. [5]
- b) Using this grammar
  - $\langle \text{assign} \rangle \rightarrow \langle \text{id} \rangle = \langle \text{expr} \rangle$
  - $\langle \text{id} \rangle \rightarrow A | B | C$
  - $\langle \text{expr} \rangle \rightarrow \langle \text{id} \rangle + \langle \text{expr} \rangle | \langle \text{id} \rangle * \langle \text{expr} \rangle | \langle \text{id} \rangle * \langle \text{expr} \rangle | (\langle \text{expr} \rangle) | \langle \text{id} \rangle$
 Show parse tree and left most derivation for following: [5]
  - (a)  $A = (A + B) * C$
  - (b)  $A = B * (C * (A+B))$ .
13. a) Define Coercion, Type error, Type checking and strong Typing. [6]
- b) Define function side effect. Consider following C program. [4]

```
int fun(int i) {
    *i +=9;
    return 10;
}

Void main() {
    int x = 8;
    x=x + fun(&x);
}
```

What is the value of x after assignment statement in main method assuming

- I. Operation are evaluated left to right
- II. Operations are evaluated right to left.



14. a) Explain about different mechanisms to implement polymorphism in C++. [6]  
b) Write short notes on generic subroutines. [4]
15. a) Explain the importance of exception handling? How it is done? [5]  
b) Explain how message passing helps in concurrency control with an example. [5]
16. a) What is logic programming? Explain it with respect to relation, rules, facts and queries. [5]  
b) Write a LISP function that computes  $n^{\text{th}}$  Fibonacci number. [5]
17. Write short notes on the following:  
a) Selection statements. [5]  
b) Java Threads. [5]

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