FACULTY OF ENGINEERING

B.E I - Year (Back log) Examination, December, 2017

Subject : English

Time : 3 Hours   **Max Marks : 75**

Note: Answer all questions from part – A & any Five questions from Part – B

Part – A

I. Fill in the blanks with suitable Prepositions   **(1/2x4=2)**
  1) The event came___ as he had predicted.

  2) He congratulated his friend ___ his success.

  3) I never travelled _____ flight.

  4) I have been living in Hyderabad _____five years.

II. Rewrite the following sentences after making necessary corrections, if any.   (1/2x6=3)
  1) Both yourself and your son are intelligent

  2) Please give me two spoonsful of sugar.

  3) The judge said that truth always triumphed.

  4) The sceneries of Kashmir are worth seeing.

  5) You like working out grammar exercises, isn't it?

  6) The patient died before the doctor had arrived.

III. Rewrite the following sentences after adding appropriate question tags (1/2x6=3)
  1) Few want to help others these days, _____

  2) We seldom meet each other these days, ____

  3) None of them were interested, _____

  4) You are not a fool,____

  5) It's a good idea,_____

  6) Americans are quite rich_____

IV. Rewrite the following sentences in Reported speech   **(1x3=3)**
  1) "I am sorry", he said.

  2) "Well done for playing so well", the coach said to his players.

  3) "Just keep quiet", the teacher told us.

V. Choose the appropriate SYNONYM for the underlined word in each sentence from the options given below: **(1/2x6=3)**
  1) She was skeptical about the safety of the newly introduced medicine.
     a)certain b)doubtful c)hopeful d)sure

  2) Mohan is quiet industrious.
     a) indifferent b)hard working c)lethargic d) lazy

3) Lets not <u>aggravate</u> the problem.
   a)expand b)lessen c)advocate d)worsen
4) There is a <u>dearth</u> of skilled labour in India.
   a)scarcity b)abundance c) availability d)sufficiency
5) A large number of people want to <u>evade</u> paying tax.
   a)avoid b)reduce c) concession d)gain
6) What is the cause for the prices to <u>soar</u> so high?
   a)rise b) fall c) stand d)reduce

VI).Match the following Idioms with their meanings   (1/2x6=3)

1. To hold water   (a) to communicate
2. To turn over a new leaf   (b) to start many things at one time
3. Out of the blue   (c) something which causes a quarrel
4. Apple of discord   (d) to become a reformed person
5. To address   (e) to be logical in an argument
6. Too many irons in the fire   (f) unexpectedly

Write a brief note on each of the following: (2x4=8)

VII. Formal and informal communication.

VIII Write a paragraph in about 50 words on 'unemployment in India'.

IX. Name the stages of 'falling apart' in Knapp's escalation model.

X.What is Satya Nadella's message for the youth of India?

PART – B

1. What are the different Styles of Communication? Discuss the style/s you would recommend in order to achieve success at the workplace.

2. What do the four spots in the Johari window signify? Give examples of a person with good interpersonal and communication skills.

3. Write an application for the post of Assistant Engineer to the Manager, Human Resource in Emerald Technologies, New Delhi, India. Enclose your resume giving all the details you think will help you get the job in a convincing manner.

4. What is Telephone Etiquette? Mention clearly the dos and don'ts of telephoning.

5. Write an essay on Satya Nadella and his message to young professionals.

6. What are some of Azim Premji's core beliefs? How did the organization he set up reflect these beliefs?

7. Explain the differences between Oral and Written communication

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FACULTY OF ENGINEERING & TECHNOLOGY

B.E / B.Tech (Bridge Course) I-Sem. (Backlog) EXAMINATION,

December/ January 2017-18

Subject: Engineering Physics

TIME: 3 HOURS   **MAX: MARKS: 75**

Note: Answer All Questions From Part-A, & Any Five Questions From Part-B.

PART – A (25 Marks)

1 In Newton's rings experiment, the diameters of the 4th and 12th dark rings are 0.4 cm and 0.7 cm respectively. Find the diameter of 28th dark ring.

2 Two Nicol's have parallel polarization directions so that the intensity of the transmitted light is maximum. Through what angle must either Nicol be turned if intensity is to drop by one –fourth of its maximum Value?

3. Distinguish Spontaneous and stimulated emission of radiation.

4. Explain the Physical significance of wave function "ψ"

5. Match the following

     1. Kronig- penny Model   (a) X-ray diffraction
     2. Stimulated emission   (b) Interference of light
     3. Newton rings   (c) Energy band formation
     4. Bragg's Law   (d) Laser
                                    (e) Diffraction of light

6. Define Fermi energy and Fermi level in metals

7. State and explain the phenomenon of Electronic Polarization

8. Distinguish between soft and hard magnetic materials

9. Define the surface to volume ratio of nano materials

10. Explain the basic principle of Atomic Force Microscope

PART – B (50 Marks)

11 a) Explain construction a working of Laurent's half –shade polari meter
   b) Derive the expression for wavelength of incident light by using Newton's rings experiment.

12 a) Describe the fibre drawing process by Double crucible method
   b) Derive the Schrodinger's time independent wave equation.

13 a) Explain the experimental determination of lattice constant by powder diffraction method.
   b) What is Hall effect? Derive the expression for the Hall coefficient and density of charge carriers.

14 a) Explain the Weiss molecular field theory of Ferromagnetism.
   b) What is super conductivity? Describe the General properties of super conductors.

15 a) Describe electrical, optical, Mechanical properties of nano materials.

b) Explain the working of SEM (Scanning Electron Microscope)

16 a) Describe the diffraction due to a single slit and calculate the expression for resultant intensity.

b) Explain the construction and working of He-Ne gas laser.

17 a) Discuss the salient features of Kronig – Penny model and its conclusions.

b) Explain the frequency and temperature dependence of dielectric polarization.

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