F 6879 (Pages : 2) Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, NOVEMBER 2017

Third Semester

Common to all Branches

EN 010 302—ECONOMICS AND COMMUNICATION SKILLS

[AI, AN, AU, CE, CH, CS, EC, EE, EI, IC, IT, ME, MT, PE, PO, ST]

(2010 Admission onwards—New Scheme)

[Supplementary]

Time : Three Hours Maximum : 100 Marks

Part A

Answer **all** *questions.*
Each question carries 3 *marks.*

1. Describe the functions of Reserve Bank of India.
2. List out the any five MNC's in India.
3. What are the reasons for tax evasion in India ?
4. Mention the government measures to control the inflation.
5. Define balance of payment.

(5 × 3 = 15 marks)

Part B

Answer **all** *questions.*
Each question carries 5 *marks.*

6. Discuss the quantitative and qualitative control of Reserve Bank of India.
7. List out the merits and demerits of privatisation.
8. Discuss the steps to control the tax evasion.
9. What is demand pulls and cost push effects of inflation ?
10. Write short note on General Agreement on Tariffs and Trade.

(5 × 5 = 25 marks)

Turn over

Part C

Answer **all** *questions.*

Each full question carries 12 *marks.*

11. Discuss the role of National bank for agriculture and rural development.

Or

12. State role of the stock market in Indian. Explain in detail about the problems faced by the stock market in India.

13. (i) What is globalisation ? Discuss the necessity and consequences of globalisation.

(ii) List out the reasons behind disinvestment of public sector undertakings.

Or

(8 + 4 = 12 marks)

14. Discuss the future prospects of IT industry in India.

15. (i) Discuss the impact and incidence of direct and indirect taxes.

(ii) List out the merits of direct and indirect taxes.

(8 + 4 = 12 marks)

Or

16. What is deficit financing ? Discuss the role and problems associated with deficit financing.

17. Write short notes on the following : (i) GNP ; (ii) NNP and (iii) DPI.

Or

18. List out the methods of estimating national income and discuss the difficulties in estimating national income.

19. State international trade. Discuss the case for free trade and case for protectionism.

Or

20. Explain the effect of TRIPS and TRIMS in the Indian economy.

(5 × 12 = 60 marks)

F 6892 (Pages : 2) Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, NOVEMBER 2017

Third Semester

Branch : Automobile/Mechanical/Production Engineering

AU 010 304/ME 010 304/PE 010 304—METALLURGY AND MATERIAL SCIENCE [AU, ME, PE]

(New Scheme—2010 Admission onwards)

[Supplementary]

Time : Three Hours Maximum : 100 Marks

Part A

Answer **all** *questions.*
Each question carries 3 *marks.*

1. What are the features of Metallic bonding ?
2. Write down the Hall-Petch equation and what is its significance ?
3. List down the objectives of Heat treatment.
4. What are the applications of High speed steels ?
5. What do you mean by S-N curve ?

(5 × 3 = 15 marks)

Part B

Answer **all** *questions.*
Each question carries 5 *marks.*

6. What is Atomic Packing Factor ? Calculate the Atomic Packing Factor for BCC structure.
7. Explain how grain size influences mechanical properties.
8. What are the factors that govern grain growth ?
9. Discuss the effects of alloying elements on the displacement of eutectoid point.
10. Explain Griffith's theory of Fracture

(5 × 5 = 25 marks)

Turn over

Part C

Answer **all** *questions.*

Each question carries 12 *marks.*

11. Explain the different mechanisms by which plastic deformation takes place in materials.

Or

12. (a) Draw the $[1\,\bar{2}\,1]$ direction and the plane $(\bar{2}01)$ in a cubic unit cell. (6 marks)

(b) Write short notes on Miller-Bravais indices. (6 marks)

13. Explain the stages involved in the specimen preparation to determine the micro structure.

Or

14. Explain the different mechanism by which diffusion occurs. What are the factors affecting diffusion.

15. Draw and explain the Iron-Carbon equilibrium diagram. Enumerate the salient features on it. Explain the invariant reactions involved.

Or

16. (a) What do you mean by Hardenability ?

(b) Write short notes on Jominy-End quench test.

17. What are the general characteristics of cast iron ? Explain the classification of cast iron describing their composition, properties, microstructure and uses.

Or

18. What are the properties of pure aluminium ? Explain the different types of aluminium alloys giving their properties and applications.

19. Explain the mechanism of Creep. What are the factors affecting Creep ?

Or

20. Write short notes on :

(i) Transgranular and Intergranular fracture.

(ii) Ductile-Brittle transition.

[5 × 12 = 60 marks]

F 6904 (Pages : 2) Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, NOVEMBER 2017

Third Semester

Branch : Automobile Engineering/Mechanical Engineering/Production Engineering/ Metallurgy

AU 010 305/ME 010 305/PE 010 305/MT 010 305—PROGRAMMING IN C
[AU, ME, PE, MT]

(New Scheme—2010 Admission onwards)

[Supplementary]

Time : Three Hours Maximum : 100 Marks

Write neat and efficient C programs wherever required.

Part A

Answer **all** *questions.*
Each question carries 3 *marks.*

1. What are the basic differences between while loop and do-while loop ?
2. Explain the difference between structures and union.
3. What do you meant by recursion ?
4. What is meant by call by reference method ?
5. What do you meant by file pointers ?

(5 × 3 = 15 marks)

Part B

Answer **all** *questions.*
Each question carries 5 *marks.*

6. (a) Write short notes on Precedence of operators. (3 marks)

   (b) Evaluate the value of *i* after executing the following program statements,

   int i = 3, j = 4, k = 2 ; i * = k = ++ j + i ;

   (2 marks)

7. With examples, write short notes on Array of structures.
8. Explain any *four* string handling functions used in C language.
9. Write short notes on pointer to an array.
10. Explain the Shift left and Shift right operations in C language.

[5 × 5 = 25 marks]

Turn over

Part C

Answer **all** *questions.*
Each full question carries 12 *marks.*

11. Write a C program to find the summation of first n terms of cosine series given by :

$$\cos(X) = 1 - \frac{x^2}{2!} + \frac{x^4}{4!} - \ldots\ldots\ldots\ldots\ldots\ldots (n \text{ terms}).$$

Or

12. (a) Explain the various storage classes used in C language. Give examples (6 marks)

(b) Write a C language to find the sum of digits of a given integer. (6 marks)

13. Write a C program to sort the values of a given matrix in descending order.

Or

14. Write a C program to multiply two matrices.

15. (a) Differentiate library defined functions and user defined functions. (6 marks)

(b) Using functions in C language, find the factorial of a given number. (6 marks)

Or

16. Write a clear C program example to illustrate the passing of a multi-dimensional array to functions.

17. (a) Write short notes on linked list concept. (6 marks)

(b) Write a C program to find the average of the values of an array using functions. (6 marks)

Or

18. Develop a linked list program to read the following information of a book store

Book name, number of pages, price, book code. The program should display the list of books in ascending price values. How can a book record be edited.

19. (a) Explain the various bit wise operators in C with appropriate examples. (6 marks)

(b) Write a complete C program to read a sentence from one file and write the reversed sentence to output file.

(6 marks)

Or

20. Write an interactive file handling C program to illustrate the maintaining the employee record of a factor. How to process

(a) Addition of new record ; and (b) Deletion of an existing record.

[5 × 12 = 60 marks]