

Reg. No. : .....

Name : .....

**First Semester B.Sc. Degree Examination, June 2022**  
**Career Related First Degree Programme Under CBCSS**

**Mathematics**

**Complementary Course I for Physics and Computer Applications**

**MM 1131.6 — MATHEMATICS — I : CALCULUS, INFINITE SERIES AND  
VECTOR ALGEBRA**

**(2020 Admission onwards)**

Time : 3 Hours

Max. Marks : 80

**SECTION – I**

Answer all the questions.

1. Find the derivative of  $y = x \sin x$ .
2. Find  $\frac{dy}{dx}$ , if  $y = a^x$ .
3. Find the derivative with respect of  $x$  of  $f(x) = (2 - 3x^2)^3$ .
4. Write the formula of integration of parts.
5. Evaluate the integral  $I = \int xe^x dx$ .

P.T.O.

6. Using the concept of Arithmetic series, find the sum of natural numbers from 1 to 500.
7. Discuss the convergence of series  $\sum_{n=1}^{\infty} \frac{1}{n}$ .
8. Find the magnitude of the vector  $V = 2i + 4j - 4k$ .
9. If  $A = 2i + 3j + k$  and  $B = -i + 2j + 3k$ , then find scalar product  $A \cdot B$ .
10. Find  $A \times B$  if  $A = i - 2j + 3k$  and  $B = 4i - 8j + 12k$ .

(10 × 1 = 10 Marks)

### SECTION – II

Answer any **eight** questions.

11. Using First Principle, find the derivative of  $f(x) = 5x$ .
12. Find derivative with respect  $x$  of  $y = \sin(e^{2x})$ .
13. Find the derivative with respect to  $x$  of  $f(t) = t^2$ , where  $x = at$ .
14. Find  $\frac{dy}{dx}$  if  $3xy + y^3 - 6x^2y = 3x$ .
15. Write the statement of mean value theorem.
16. Evaluate the integral  $I = \int xe^{\frac{x^2}{2}} dx$ .
17. Find the mean value the function  $y = x^2$  between  $x = 1$  and  $x = 2$ .
18. Find the length of the line segment  $y = 3x$  from  $x = 1$  and  $x = 2$ .

19. Using difference method, find the sum  $\sum_{n=1}^{\infty} \frac{1}{n(n+1)}$ .
20. Write down the Taylor's series expansion if a function  $f(x)$  about  $x = 0$ .
21. Write an example for a power series.
22. Write an example for alternating series.
23. If  $A = 2i - 3j - 5k$  and  $B = i - 2j - k$  then show that  $A + B = B + A$ .
24. Two particles have velocity  $V_1 = 6j + k$  and  $V_2 = -i + k$  respectively. Find the velocity  $U$  of the second particle relative to the first.
25. Find the equation of a line passing through the point  $A(1, 1, 1)$  in the direction of the vector  $D = 2i + 3j - k$ .
26. Find scalar triple product of  $A = i + 2j + 3k$ ,  $B = 4i + 5j + 6k$  and  $C = 7i + 8j + 10k$ .

(8 × 2 = 16 Marks)

### SECTION – III

Answer any six questions.

27. Write Leibnitz formula to calculate  $n^{\text{th}}$  derivative  $f^{(n)}(x)$  of  $f(x) = u(x)v(x)$ , hence find the 3rd derivative of  $f(x) = \frac{x^3}{\csc x}$ .
28. Show that  $y = x + \tan x$  satisfy the differential equation  $\cos^2 x \frac{dy}{dx} - 2y + 2x = 0$ .

29. Show that the function  $f(x) = \frac{1}{4}x^3 + 1$  satisfy the hypothesis of the mean value theorem over the interval  $[0, 2]$ , and find all values of  $c$  in the interval  $(0, 2)$  at which of the tangent line to the graph of  $f$  is parallel to the secant line joining the points  $(0, f(0))$  and  $(2, f(2))$ .
30. (a) Define improper integral.  
 (b) Evaluate the integral  $I = \int_0^2 (2-x)^{-1/4} dx$ .
31. Find the area of the surface generated by revolving  $x = \frac{y^3}{3}$ ;  $0 \leq y \leq 1$  about  $y$ -axis.
32. Determine the length of the curve  $y = \log(\sec x)$  between  $0 \leq x \leq \frac{\pi}{4}$ .
33. Find the value of  $\int \tan^6 x dx$ .
34. Find the sum of the series  $\sum_{n=1}^N (n+1)(n+3)$ .
35. Determine whether the series converge, if it converge find sum  
 (a)  $\sum_{k=0}^{\infty} \frac{5}{4^k}$   
 (b)  $\sum_{k=1}^{\infty} 3^{2k} 5^{1-k}$ .
36. Show that  $A(3, 2, 2)$ ,  $B(6, 2, 2)$  and  $C(3, 4, 2)$  are vertices of a right angle triangle.
37. Construct the reciprocal vectors of  $a = 2i$ ,  $b = j + k$ ,  $c = i + k$ .
38. Find the angle between the planes  $2x + y + 2z = -1$  and  $x + y - z = 2$ .

(6 × 4 = 24 Marks)

## SECTION - IV

Answer any two questions.

39. (a) If  $x\sqrt{1+y} + y\sqrt{1+x} = 0$  prove that  $\frac{d^2y}{dx^2} - \frac{2}{(1+x)^3} = 0$ .
- (b) If  $y = \sin(\log x)$ , prove that  $x^2y_2 + xy_1 + y = 0$ .
- (c) If  $y = (\tan^{-1} x)^2$  then prove that  $(x^2 + 1)\frac{d^2y}{dx^2} + 2x(x^2 + 1)\frac{dy}{dx} - 2 = 0$ .
40. (a) Find the parametric equation describing the line segment joining the points  $(1, 2, 1)$  and  $(2, 5, 7)$ .
- (b) Find equation of line in 3-space passing through the points  $(2, -2, 2)$  and  $(-1, -4, 1)$ .
- (c) Find equation of plane passing through  $(1, 1, 0)$ ,  $(1, 2, 1)$  and  $(-2, 2, -1)$ .
41. (a) Show that the value of the integral  $I = \int_0^1 \frac{1}{(1+x^2+x^3)^{\frac{1}{2}}} dx$  lies between 0.810 and 0.882.
- (b) The equation in polar coordinates of an ellipse with semi-axes  $a$  and  $b$  is  $\frac{1}{p^2} = \frac{\cos^2 \phi}{a^2} + \frac{\sin^2 \phi}{b^2}$ . Find the area  $A$  of the ellipse.
42. (a) Define radius of curvature and write the formula to calculate the radius of curvature of a function  $f(x)$  at a point  $(x, y)$ .
- (b) Show that the radius of curvature at the point  $(x, y)$  on the ellipse  $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$  has magnitude  $\frac{(a^4y^2 + b^4x^2)^{\frac{3}{2}}}{a^4b^4}$ .
- (c) Show that at any point  $(x, y)$  on circle of radius  $a$ , radius of curvature is  $a$ .

43. (a) Use the comparison test to determine whether the following series converge or diverge (i)  $\sum_{k=1}^{\infty} \frac{1}{\sqrt{k} - \frac{1}{2}}$  (ii)  $\sum_{k=1}^{\infty} \frac{1}{2k^2 + k}$ .

- (b) Using Ratio test, verify the convergence or divergence of the series

$$\sum_{k=1}^{\infty} \frac{k^k}{k!}$$

44. (a) Find the minimum distance from the point  $P$  with coordinates  $(1, 2, 1)$  to the line  $r = a + \lambda b$ , where  $a = i + j + k$  and  $b = 2i - j + 3k$ .
- (b) Find the distance from the point  $P$  with coordinates  $(1, 2, 3)$  to the plane that contains the points  $A, B$  and  $C$  having coordinates  $(0, 1, 0), (2, 3, 1)$  and  $(5, 7, 2)$ .

**(2 × 15 = 30 Marks)**

Reg. No. : .....

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**First Semester B.Sc. Degree Examination, June 2022**  
**Career Related First Degree Programme under CBCSS**

**Physics and Computer Applications**

**Foundation Course I**

**PC 1121 : MECHANICS, THERMODYNAMICS AND PROPERTIES OF  
MATTER**

**(2020 Admission Onwards)**

Time : 3 Hours

Max. Marks : 80

**SECTION – A**

Answer **all** questions in **one** or **two** sentences. **Each** question carries 1 mark.

1. What is a rigid body?
2. In a body with axial symmetry, what will be the direction of the total angular momentum and angular velocity if the body is allowed to rotate about the axis of symmetry?
3. What is a system?
4. What is a quasistatic process?
5. What does the second law of thermodynamics represent?
6. Why does entropy be considered as an extensive property?
7. Which are the two types of normal stress?

P.T.O.

8. How the energy is utilized in driving the liquid under streamline and turbulent flow?
9. What do you understand from the equation of continuity of flow?
10. Write down the dimension of thermal conductivity.

(10 × 1 = 10 Marks)

SECTION – B

Answer any **eight** questions, not exceeding a paragraph. **Each** question carries **2** marks.

11. What are the factors on which the moment of inertia of a body depends? How does the moment of inertia depend on the radius of gyration?
12. A solid circular disc and a wheel of same mass and the same external radius are given. Comment on their MI with reason.
13. Prove that  $J^2 = 2EI$  where J, E and I are angular momentum, rotational kinetic energy and moment of inertia respectively.
14. Distinguish between closed and isolated system with example.
15. State and explain zeroth law of thermodynamics.
16. How does the internal energy of a system develop?
17. Mention the significances and limitations of first law of thermodynamics.
18. What is an indicator diagram? What are its uses?
19. State the Nernst's heat theorem and its importance.
20. What is bending moment? How is it related to flexural rigidity?
21. Why do girders with I cross section be preferred to rectangular cross section?
22. What is venturimeter? What is its working principle?
23. How does surface energy differ from surface tension?



24. How does excess pressure develop inside a liquid drop? On what factors does it depend?
25. Define solar constant. Explain the use of pyrheliometer.
26. State rotational equivalent laws of Newton's laws of linear motion.

(8 × 2 = 16 Marks)

SECTION – C

Answer any **six** questions. Each question carries **4** marks.

27. A cord is wound round the axle of a flywheel. The diameter of the axle is 2.54 cm. A mass of 500g is attached to the free end of the cord. Starting from rest, the mass is released from the axle after falling through 50 cm. After the mass is released, the flywheel is making 22 rotations in 15 s before coming to rest. Calculate the kinetic energy of the mass at the moment of release.
28. Prove that the moment of inertia of sphere of mass  $m$  and diameter  $d$  about diameter is  $md^2/10$ . Hence find the value of the MI about a tangent.
29. Determine the freezing point of water if a pressure of 136.2 atm produces a change of specific volume of  $91 \times 10^{-6} \text{ m}^3$  for 1kg water. The latent heat of ice =  $3.36 \times 10^5 \text{ Jkg}^{-1}$
30. Prove that there is no change in entropy for reversible cycle.
31. What will be the density of lead when a pressure of 2 GPa is applied? Given the density of lead =  $11400 \text{ kgm}^{-3}$  and its bulk modulus = 8 GPa.
32. Calculate the work done in twisting a steel wire of radius 1 mm and length 10 cm through an angle  $30^\circ$  if the rigidity modulus of steel is 80 GPa.
33. Show that Bernoulli's equation can be derived from Euler's equation.
34. In an experimental method to determine the surface tension of a liquid by capillary rise method a capillary tube of diameter 1 mm is used. Determine the rise of the liquid in the tube if the surface tension of the liquid is  $70 \text{ mN m}^{-1}$  and its relative density is 1.

35. Calculate the actual velocity of efflux of water from a tank which is filled up to 1.96m.
36. The electrical conductivity of a copper wire of length 0.5 m and diameter 0.3 mm at room temperature is  $5.9 \times 10^7 \Omega^{-1}m^{-1}$ . Find its thermal conductivity if the Lorentz number is  $2.32 \times 10^{-8} W\Omega K^{-2}$ .
37. A wooden ice box of 1.8 cm thick, lined inside with cork 4 cm thick. If the temperature of the inner surface of the cork is  $0^\circ C$  and that of the outer surface of wood is  $10^\circ C$ , what is the temperature of the interface? The thermal conductivity of wood is  $0.12 Wm^{-1} K^{-1}$  and that of cork is  $0.037 Wm^{-1} K^{-1}$ .
38. Two concentric spherical shells of radius 5 cm and 10cm have their intermediate space filled with charcoal powder of thermal conductivity  $0.084 Wm^{-1} K^{-1}$ . How much energy should be supplied per second to set up a temperature difference of  $60^\circ C$  between the shells?

**(6 × 4 = 24 Marks)**

#### SECTION – D

Answer any **two** questions. **Each** question carries **15** marks.

39. Discuss the motion of a body rolling down an inclined plane. Use the result to identify two cylinders on hollow and other solid but of same masses and same external radii.
40. Explain the working of an ideal heat engine. How can you increase the efficiency of it?
41. Compare the working of Otto engine and Diesel engine.
42. With detailed theory on uniform bending explain how do you determine the Young's modulus of a bar and rod shaped material.
43. Describe the experimental procedure of Quicke's method with detailed theory.
44. State and explain Stefan's law? How do you determine Stefan's constant?

**(2 × 15 = 30 Marks)**

(Pages : 4)

N – 4145

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Name : .....

**First Semester B.A./B.Sc./B.Com. Degree Examination, June 2022**

**Career related First Degree Programme under CBCSS**

**Language Course II – Additional Language – Malayalam**

**ML 1111.3 : ഗദ്യസാഹിത്യം**

**(2021 Admission)**

Time : 3 Hours

Max. Marks : 80

- I. ഒരു വാക്കിലോ വാക്യത്തിലോ ഉത്തരമെഴുതുക.
1. മലയാളത്തിലെ ആദ്യ ലക്ഷണയുക്തനോവൽ എന്ന് വിളിക്കുന്ന കൃതി ഏതാണ്?
2. കണ്ണീരും കിനാവും ആരുടെ ആത്മകഥയാണ്?
3. നല്ല ഭാഷ എന്ന കൃതി രചിച്ചതാര്?
4. പ്രവാസജീവിതം പശ്ചാത്തലമാക്കി ബെന്യാമിൻ രചിച്ച നോവൽ ഏതാണ്?
5. വാസനാവികൃതി എന്ന ചെറുകഥയുടെ കർത്താവാരാണ്?
6. പാതിരാസൂര്യന്റെ നാട്ടിൽ എന്ന യാത്രാവിവരണം ആരുടേതാണ്?
7. മഹാഭാരതത്തെ പശ്ചാത്തലമാക്കി എം.ടി. വാസുദേവൻ നായർ രചിച്ച നോവൽ ഏത്?
8. 'ആത്മകഥയ്ക്ക് ഒരാമുഖം' ആരുടെ ആത്മകഥയാണ്?

P.T.O.

- 20. എങ്കിൽ നമുക്കിപ്രദമായ എഴുത്തുകാരെക്കുറിച്ച് എഴുതുക.
- 19. ഒരു തരം കവിതയെക്കുറിച്ച് പഠിച്ച് അതിനെക്കുറിച്ച് എഴുതുക. ഇതിനെക്കുറിച്ച് എഴുതുക.
- 18. പട്ടിയെക്കുറിച്ച് എഴുതുക. പട്ടിയെക്കുറിച്ച് എഴുതുക. പട്ടിയെക്കുറിച്ച് എഴുതുക.
- 17. പട്ടിയെക്കുറിച്ച് എഴുതുക. പട്ടിയെക്കുറിച്ച് എഴുതുക. പട്ടിയെക്കുറിച്ച് എഴുതുക.
- 16. പട്ടിയെക്കുറിച്ച് എഴുതുക. പട്ടിയെക്കുറിച്ച് എഴുതുക. പട്ടിയെക്കുറിച്ച് എഴുതുക.
- 15. പട്ടിയെക്കുറിച്ച് എഴുതുക. പട്ടിയെക്കുറിച്ച് എഴുതുക. പട്ടിയെക്കുറിച്ച് എഴുതുക.
- 14. പട്ടിയെക്കുറിച്ച് എഴുതുക. പട്ടിയെക്കുറിച്ച് എഴുതുക. പട്ടിയെക്കുറിച്ച് എഴുതുക.
- 13. പട്ടിയെക്കുറിച്ച് എഴുതുക. പട്ടിയെക്കുറിച്ച് എഴുതുക. പട്ടിയെക്കുറിച്ച് എഴുതുക.
- 12. പട്ടിയെക്കുറിച്ച് എഴുതുക. പട്ടിയെക്കുറിച്ച് എഴുതുക. പട്ടിയെക്കുറിച്ച് എഴുതുക.
- 11. പട്ടിയെക്കുറിച്ച് എഴുതുക. പട്ടിയെക്കുറിച്ച് എഴുതുക. പട്ടിയെക്കുറിച്ച് എഴുതുക.
- II. 50 പാക്കിസ്റ്റാൻ കവിതയെക്കുറിച്ച് എഴുതുക. പട്ടിയെക്കുറിച്ച് എഴുതുക.

(10 x 1 = 10 Marks)

- 10. പട്ടിയെക്കുറിച്ച് എഴുതുക. പട്ടിയെക്കുറിച്ച് എഴുതുക. പട്ടിയെക്കുറിച്ച് എഴുതുക.
- 9. പട്ടിയെക്കുറിച്ച് എഴുതുക. പട്ടിയെക്കുറിച്ച് എഴുതുക. പട്ടിയെക്കുറിച്ച് എഴുതുക.

21. തെറ്റ് തിരുത്തുക.

(a) പീഠനം

(b) കൃത്രിമം

(c) കർണ്ണകടോരം

(d) ബലിഷ്ഠം

22. വാക്യത്തിൽ തെറ്റുണ്ടെങ്കിൽ തിരുത്തി എഴുതുക.

(a) കടുത്ത മാനസിക സമ്മർദ്ദത്താൽ അയാൾ സ്വയം ആത്മഹത്യ ചെയ്തു.

(b) ഓരോ പഞ്ചായത്തിലും 50 വീടുകൾവീതം പണിയുമെന്ന് മന്ത്രി അറിയിച്ചു.

23. ആനയുടെ പേർ പിന്നീടുള്ള ഒരു നേരമ്പോക്കാണ് എന്ന് ലേഖകൻ പറയാൻ കാരണമെന്ത്?

24. മഹാപുരുഷന്മാർ അധികം പേരും ഏകാന്തത ഇഷ്ടപ്പെടുന്നവരാണ് എന്ന് പറയുന്ന തെന്തുകൊണ്ട്?

25. സ്ത്രീകളായിരുന്നു പള്ളിക്കുന്നിലെ വലിയ വായനക്കാർ എന്ന് ടി. പത്മനാഭൻ സ്ഥാപിക്കുന്ന തെങ്ങനെ?

26. മലയാളി ഇന്ന് കയറ്റിയയ്ക്കാനുള്ള സാധനമാണ് എന്ന് എം.എൻ. നിരീക്ഷിക്കുന്നതെന്തുകൊണ്ട്?

**(8 × 2 = 16 Marks)**

III. **100** വാക്കിൽ കവിയാതെ ഏതെങ്കിലും ആറ് ചോദ്യത്തിന് ഉത്തരമെഴുതുക.

27. ഭ്രാന്തിച്ചെറിയമ്മ എന്ന കഥാപാത്രം നമ്പൂതിരിസമുദായത്തിലെ സ്ത്രീകളുടെ പ്രതീകമാകുന്ന തെങ്ങനെ?

28. തങ്കവും മിതാജിയും തമ്മിലുള്ള കൂടിക്കാഴ്ച വിവരിക്കുക.

29. ബംഗ്ലാദേശ് യുദ്ധസമയത്ത് ദയാബായിയുടെ സേവനാനുഭവങ്ങൾ വിശദമാക്കുക.

30. സൂർളാഘാപ്ത ആദിവാസി ഗ്രാമത്തിൽ ദയാബായി നടത്തിയ പ്രവർത്തനങ്ങൾ എന്തെല്ലാം?

31. കേശവശ്ശാരുടെ സ്വഭാവസവിശേഷതകൾ എന്തെല്ലാം?

32. പത്തായപ്പുര കൃഷ്ണൻ കുട്ടിയിൽ നിറച്ച ഓർമ്മകൾ എന്തെല്ലാം?

33. ഊർത്തിള ഗർഭിണിയാണെന്ന വാർത്ത സീതയിലുണ്ടാക്കിയ മാറ്റങ്ങൾ എന്തെല്ലാം?
34. ഇല്യാസ് വെള്ളത്തിൽ പാഴിലപോലെ ഒഴുകിനടന്നു എന്നു പറയുന്നതെന്തുകൊണ്ട്?
35. ആഘോഷത്തോടെ നടത്തുന്ന പേരിടൽ കർമ്മത്തിന് യാതൊരർത്ഥവും ആരും കല്പിക്കുന്നില്ല എന്ന് ലേഖകൻ പറയുന്നതെന്തുകൊണ്ട്?
36. പ്രവൃത്തിമാർഗ്ഗം തീർച്ചപ്പെടുത്തുന്നതിനുള്ള ഉപാധികളെക്കുറിച്ച് കേശവമേനോന്റെ അഭിപ്രായമെന്ത്?
37. പള്ളിക്കുന്നിലെ പ്രധാന ഉത്സവങ്ങൾ എന്തെല്ലാം?
38. മലയാളത്തിലേക്ക് വിവർത്തനം ചെയ്യുക

Machine translation is the process of translating from source language text into the target language. Natural Language processing or computational linguistics deals with understanding and developing computational theories allow us to understand the structure of language and build computer software that can process.

(6 × 4 = 24 Marks)

IV. 300 വാക്കിൽ കവിയാതെ ഏതെങ്കിലും രണ്ടു ചോദ്യത്തിന് ഉത്തരമെഴുതുക.

39. നമ്പൂതിരിസമുദായപരിഷ്കരണത്തിന്റെ പരിശ്രമങ്ങളെ അഗ്നിസാക്ഷി എന്ന നോവലിൽ ആവിഷ്കൃതമാകുന്നതെങ്ങനെ?
40. ആധുനികലോകത്തും ജാതിചിന്ത തീക്ഷ്ണമായി നിലനിൽക്കുന്നു എന്ന വസ്തുത വില്ലുവണ്ടി എന്ന കഥ ചിത്രീകരിക്കുന്നതെങ്ങനെ?
41. പോരാട്ടങ്ങളുടെ ജീവിതമാണ് ദയാബായി. വിവരിക്കുക.
42. ഡിജിറ്റൽ കാലത്തെ മാറുന്ന വായനാസങ്കല്പങ്ങൾ.
43. കോവിഡാനന്തര വിദ്യാഭ്യാസം : മാറ്റങ്ങളും വെല്ലുവിളികളും.
44. ഭാഷാപഠനവും സാങ്കേതികവിദ്യയും.

(2 × 15 = 30 Marks)

(Pages : 4)

N – 4270

Reg. No. : .....

Name : .....

**First Semester B.Sc. Degree Examination, June 2022**  
**Career Related First Degree Programme under CBCSS**  
**Physics and Computer applications**  
**PC 1171 : COMPUTER FUNDAMENTALS AND ORGANISATION**  
**(2021 Admission)**

Time : 3 Hours

Max. Marks : 80

**SECTION – A**

(Very Short Answer Questions)

Answer all questions. Each question carries 1 mark.

1. Mention four characteristics of a computer.
2. What do you mean by computer ports?
3. Mention various types of printers.
4. Expand SRAM.
5. What are the advantages of magnetic tape?
6. Expand the term ASCII.
7. Which are various CPU registers?
8. What is the use of parallel processor?

P.T.O.

9. What do you mean by asynchronous data transfer?
10. What is an interrupt?

**(10 × 1 = 10 Marks)**

**SECTION – B**

**(Brief Answer Questions)**

Answer any **eight** questions. Each question carries **2** marks.

11. Write notes on CMOS.
12. What are the various types of ribbon cables?
13. Write note on optical disk.
14. Write the use of memory stick.
15. Explain RISC architecture.
16. What is hit ratio?
17. Write note about micro programmed control unit.
18. Write notes on any four input devices.
19. What is the use of SMPS?
20. What is the difference between hard copy and soft copy?
21. Explain synchronous data transfer.
22. What is a program counter?
23. What is SRAM?
24. Explain various types of instructions.



25. Mention any two DMA transfer modes.
26. What is an USB?

**(8 × 2 = 16 Marks)**

### SECTION – C

(Short Essay Type Questions).

Answer any **six** questions. Each question carries **4** marks.

27. Explain BIOS.
28. Write short note on laser printer.
29. Explain primary memory in detail.
30. Explain cache memory in detail.
31. Write short note on virtual memory.
32. Explain the concept of pipelining.
33. Explain various types of instruction set.
34. Write short note on various types of interrupts.
35. Write short note on types of ROM.
36. Write short note on DRAM.
37. What is a plotter? Explain briefly.
38. Write notes on RISC architecture.

**(6 × 4 = 24 Marks)**

**SECTION – D**

**(Long Essay)**

Answer any **two** questions. Each question carries **15** marks.

39. Explain various output devices.
40. Explain magnetic disk in detail.
41. Explain instruction cycle with diagram.
42. Explain DMA in detail.
43. Explain basic computer organization with neat diagram.
44. Explain the concept of parallel processing.

**(2 × 15 = 30 Marks)**

(Pages : 4)

N – 4149

Reg. No. : .....

Name : .....

**First Semester B.A./B.Sc. Degree Examination, June 2022**

**Career Related First Degree Programme Under CBCSS**

**Hindi**

**Language Course : Additional Language**

**HN 1111.3 – HINDI GADYA SAHITYA**

**(2020 Admissions onwards)**

Time : 3 Hours

Max. Marks : 80

1. एक शब्द या एक वाक्य में उत्तर लिखिए।
1. शंकर कौन था?
2. शिकंजे का दर्द किस विधा की रचना है?
3. मंगर बच्चों के प्रति कैसा व्यवहार करता था?
4. चम्पक एकांकी के रचयिता कौन हैं?
5. त्रिशंकु क्या काम करता था?
6. प्रेमचंद की दो कहानियों के नाम लिखिए।
7. चम्पक कौन है?
8. तट की खोज किसका उपन्यास है?
9. समाज सेवा किस विधा की रचना है?
10. भकोलिया कौन है?

**(10 × 1 = 10 Marks)**

P.T.O.

II. किन्हीं आठ प्रश्नों के उत्तर करीब 50 शब्दों में लिखिए।

11. गांववालों ने शंकर की सहायता क्यों नहीं की?
12. त्रिशंकु बेचारा में विश्वामित्र की भूमिका क्या है?
13. सुशीला टाकभौरै ने किसको वाल्मीकी रहस्य कहा है?
14. मंगर के मन में लेखक के प्रति विशेष स्नेह होने का क्या कारण है?
15. शकुन्तला और मालती किशोर के घर क्यों आयी थीं?
16. मनुष्य क्यों समाज का संगठन करता है?
17. सुशीला टाकभौरै अपनी ही जाति के लोगों के इलाके में किराए पर क्यों न रह सकी?
18. विप्र ने सात साल तक शंकर से सवा सेर गेहूं का जिक्र क्यों नहीं किया?
19. 'क्रिया के पश्चात प्रतिक्रिया नैसर्गिक नियम है' यहाँ प्रेमचंद का मतलब क्या है?
20. बेनीपुरी ने मंगर का कैसा वर्णन किया है?
21. सुशीलाजी को मकान किराए पर देते वक्त महेंद्र जी की पत्नी ने क्या-क्या शर्तें रखी थीं?
22. 'त्रिशंकु बेचारा' में इंद्र देव की भूमिका क्या है?
23. शंकर ने विप्र जी से सवा सेर गेहूं उधार के रूप में क्यों माँगा?
24. चम्पक का वर्णन किशोर कैसे करता है?
25. किशोर को चम्पक कहाँ से मिला?
26. सुशीलाजी ने अपना घर कहाँ खरीदा?

(8 × 2 = 16 Marks)

III. किन्हीं छः प्रश्नों के उत्तर 120 शब्दों में लिखिए।

27. मिसिस सोलंकी के असली चेहरे का खुलासा सुशीलाजी कैसे करती है?
28. शंकर कैसा व्यक्ति था?
29. सुशीलाजी की माँ-बाप जब किराये के मकान में आते तो वे घर के अन्दर ही क्यों रहते?
30. विप्रजी ने शंकर के बेटे को अपने खलिहान में काम पर क्यों रखा?
31. त्रिशंकु को आखिर धर्मशाला में जाकर रहना पड़ा। क्यों?
32. किशोर चम्पक को बेचना क्यों चाहता है?
33. वृद्ध ने चम्पक को घायल क्यों किया?
34. बच्चों के प्रति मंगर के मन में वितृष्णा होने का क्या कारण है?
35. बुढ़ापे में मंगर की क्या हालत हो गयी?
36. समाज किसे कहते हैं?
37. इंद्र देव त्रिशंकु को स्वर्गपुरी में जगह क्यों नहीं देता?
38. समाज में निम्न जाति के लोगों के उद्धार के लिए सुशीलाजी ने क्या-क्या किये?

(6 × 4 = 24 Marks)

IV. किन्हीं दो प्रश्नों के उत्तर करीब 250 शब्दों में लिखिए।

39. 'सवा सेर गेहूँ कहानी में प्रेमचंद ने गरीब लोगों पर होने वाले शोषण का यथार्थ चित्र प्रस्तुत किया है।' समर्थन कीजिये।
40. चम्पक एकांकी का सारांश लिखिए।
41. 'त्रिशंकु बेचारा' के शीर्षक के औचित्य पर प्रकाश डालिए।

42. किराए के मकान में सुशीलाजी ने जिन-जिन तकलीफों का सामना किया उसका वर्णन कीजिये।
43. मंगर का चरित्र चित्रण कीजिये।
44. समाज सेवा निबंध में लेखक क्या बताना चाहते हैं?

**(2 × 15 = 30 Marks)**

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Reg. No. : .....

Name : .....

**First Semester B.A./B.Sc./B.Com. Degree Examination, June 2022**

**First Degree Programme under CBCSS**

**Language Course – I – English**

**EN 1111.1/EN 1111.2/EN 1111.3 : LANGUAGE SKILLS**

**(Common for B.A./B.Sc. (EN 1111.1), B.Com. (EN 1111.2) &  
Career Related Group 2(a) (EN 1111.3))**

**(2020 Admission Onwards)**

Time : 3 Hours

Max. Marks : 80

- I. Answer all questions, each in a word or a sentence.
  1. What is entropy?
  2. Name two non-verbal cues.
  3. Which is the standard form of English used in BBC?
  4. What are Consonants?
  5. Identify the sounds underlined in the following words :  
(a) king (b) Think
  6. Mark stress in the following Words :  
(a) kindness (b) pity
  7. What is CV?
  8. What is a blog?
  9. What do you mean by gestures?
  10. What is netiquette?

**(10 × 1 = 10 Marks)**

P.T.O.

- II. Answer any **eight**, each in a short paragraph not exceeding **50** words.
11. Distinguish between verbal and non-verbal communication.
  12. Explain entropy, redundancy and noise.
  13. Why is listening considered to be a conscious activity?
  14. What is intonation? Explain different intonation patterns with examples.
  15. What are the four main types of writing?
  16. How is a formal letter different from an informal letter?
  17. What are the different segments you should bear in mind while writing reports?
  18. Differentiate between intensive and extensive reading.
  19. Mention some barriers to effective reading.
  20. Give a brief description of the format of writing minutes.
  21. How can you successfully introduce yourself at a job interview?
  22. What is the role of eye contact in communication?
  23. Explain strong form and weak form of words with examples.
  24. Differentiate between pitch and intonation.
  25. Write a paragraph on different forms of editing.
  26. Mention some means to improve effectiveness in academic writing.

**(8 x 2 = 16 Marks)**

III. Answer any **six**, each in a paragraph not exceeding **100** words.

27. Complete the conversation given below :

Raju : Excuse me sir, when is the next train to New Delhi today?

Station Master : \_\_\_\_\_

Raju : \_\_\_\_\_

Station Master : Yes, there is a train at five o'clock in the morning tomorrow.

Raju : That's great, \_\_\_\_\_

Station Master : Yes, you can do the booking right away.

Raju : \_\_\_\_\_

Station Master : Of course, we offer accommodation.

Raju : \_\_\_\_\_



Station Master : The rent varies according to the facilities offered. What kind of room do you need?

Raju : \_\_\_\_\_ How can I go to the dormitory?

Station Master : \_\_\_\_\_

Raju : \_\_\_\_\_

28. You are asked to anchor the Merit Day celebrations of your college. Prepare a script for the same.
29. Prepare a speech on Post-covid situation in the field of education.
30. You are the fine-arts secretary of your college. You would like to bring a celebrity artist for the Arts Festival as chief guest and you are talking to him/her over telephone. Prepare at least ten exchanges between you and the artist.
31. Write a blog on the traffic problems in your district.
32. You are interested to begin a startup company. Write an email to Kerala Startup Mission enquiring about the financial assistance you could avail for this business enterprise.
33. Write a script for a podcast on the analysis of a movie you have watched recently.
34. Edit the passage given below :

In developing countries, child marriage still exist and is responsibility for ruining many lives. Similarly, dowry is a very serious and common social issue that almost all classes of people partake in. Another prominent social issues is gender inequality which take away many opportunity from deserving people. Domestic violence especially against women are a serious social issue we must all fight against.
35. Prepare minutes of a meeting conducted by the Nature Club of your college in relation to the World Environmental Day. Imagine you are the coordinator of this Club.
36. Write a report on a proposal for organizing a theatre workshop.
37. Write a letter to your uncle giving him a description of your class project.
38. Prepare notes for the following passage :

Body speaks more eloquently than words. People comprehend through observing the speaker rather than merely listening to the words spoken loudly. Soft skills are about working on your personality, your behaviour patterns, your communication skills and inter-personal skills. You may not be getting grades for

your soft skills as against your hard skills which involve direct evaluation methods. Soft skills become more crucial because it involve your emotional and social intelligence as well.

Soft skills are developed over a period of time, through life situations and social interactions. Nature and nurture play equally important roles in this context. As an adult, one can improve one's life skills by becoming aware of one's self and working towards correcting them. Soft skills can be developed through constant practice and repeated patterns of behavior will get ingrained into a person's character.

**(6 × 4 = 24 Marks)**

IV. Answer any **two** each in about three hundred words :

39. Write a paragraph on any two of the following :

(a) College life

(b) India as a nation

(c) Online education

40. Employability Centre in your district is making a massive appointment drive. You make an enquiry with the employment officer about the kind of vacancies available according to your qualification and experience. Write the conversation.

41. Write a speech on the topic "Eco-tourism."

42. You would like to apply for the post of marketing executive in a top rated company. Prepare a cover letter and CV to apply for the same.

43. You are interviewing a famous sports person for the weekend edition of a news paper. Write the possible conversation.

44. You have been asked to write a report of the cultural fest held in your hometown recently for a leading daily. Write out the report, along with a suitable title.

**(2 × 15 = 30 Marks)**