Code No. 2503

FACULTIES OF ARTS, COMMERCE, SCIENCE, MANAGEMENT AND SOCIAL SCIENCES

B.A./ B.Sc /B.Com./B.B.A./B.S.W. (Regular) II–Year Examination, March/April 2016

Subject : ENGLISH

Paper – II : General English

Time : 2 ½ hours Max. Marks : 75

PART – A (40 Marks)

I **Answer any Four of the following in about 100 words each :** 5 x 4 = 20

1 Brin and page are inspirational role models. Discuss.
2 Discuss in detail Kalam's experiences with Jallauddin and Samsuddin, focusing on what he learned from them.
3 Explain the importance of interpersonal skills in a workplace.
4 Write a character sketch of Uncle Podger.
5 How does father William react to his son's criticisms?

II **A) Read the following lines and answer the questions given below :** 1 x 5 = 5

Cities in India are now prioritizing the importance of this and the need to separate one's waste into 'wet' waste and 'dry' waste. Wet waste is biodegradable, having no negative impact on the environment. Dry waste is plastics and electronics and other such material that needs to be recycled. In Hyderabad, the municipal corporation authorities have requested additional amendments to the current disposal system in an attempt to better the system. The hope is to both educate the average Indians on the dangers of littering, as well as modernize the city's garbage collection to cope with the city's rapid rate of development. Of course, all this will only work if one is aware of the dangers of the situation and is keen on helping maintain their environment.

a) Who has requested for amendments to streamline disposal system?
b) Which waste is not biodegradable?
c) What is the problem with the current disposal system?
d) Why is it important to separate waste?
e) Write the antonym of the word 'hope'.

B) Read the following passage and answer the questions given below : 1 x 5 = 5

But, in going down an alley
To a castle in the valley,
They completely lost their way,
And wandered all the day
Till, to see them safely back,
They paid a Ducky-quack,
And a Beetle, and a Mouse
Who took them to their house.

a From where have the above lines been taken from?
b Who lost their way?
c Where are the speakers now?
d Why did they have to pay the duck, the beetle and the mouse?
e Write the meaning of 'wander'.

..2

III Answer any Two of the following in about 100 words each. 5 x 2 = 10

1 What are the qualities needed for a good and motivational leader? Discuss.
2 Why is change an essential quality needed to cope in the present life? Elaborate.
3 What is Assertive Communication? Cite an example from your life situation as to how you tackled a problem.
4 What are the mannerisms that one should follow while dinning in the public?

PART – B (15 Marks)

IV Mark stress on the following words : 1 x 5 = 5

1 Examination
2 Relieve
3 Politics
4 Agree
5 Produce

V Mark stress on the following words : 1 x 5 = 5

1 Déjà vu
2 Ennui
3 Aficionado
4 Kindergarten
5 Hoi polloi

VI Convert the following sentences as directed. 1 x 5 = 5

1 Two rich men contested in the competition (underline the noun phrase).
2 I like to read stories which have a happy ending (under the adjective clause).
3 He said, "Can you drive the latest bike that has come in the market"? (Convert to indirect speech).
4 Walk carefully lest you should fall (Convert to compound sentence).
5 No other person in this group is as intelligent as Mr. Gupta (change to superlative degree).

PART – C (20 Marks)

VII Answer any Two of the following questions : 5 x 2 = 10

1 Write a feasibility report to the principal of your college onorganizing placement classes for your college students.
2 Write the format used for writing scientific papers.
3 Write a review on any famous novel that you have read.
4 Write an article on the issues of the current garbage disposal system in Telangana.

VIII Answer any Two of the following questions : 5 x 2 = 10

1 Write a letter to the editor of a local newspaper complaining about bad roads in you locality.
2 Write a blog about the cultural fest that was organized in your college.
3 Write an autobiography recounting your childhood memories
4 Write a short story in about 200 words with a first person point-of-view.

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Code: 10286

Faculties of Arts, Commerce, Sci... Management & Social Science

BA, B.Com, BBA, BSc, BSW II Year III Semester Examination December 2017

Subject: General English

Paper - III

Time : 3 Hours

Max. Marks: 80

PART – A (5 x 4 = 20 Marks)

Answer any FIVE of the following.

1. Answer as directed.
   a) This is not an exhaustive list of antonyms. (Give the synonym of the underlined word).
   b) When the army advances, the enemy _____. (Give the antonym of the underlined word).
   c) He came _____ the room.(Fill in the blank with a suitable preposition).
   d) This cloth is inferior than that. (Correct the sentence).

2. Answer as directed.
   a) I have to stop on the way fill my car with gas. (Replace the underlined American English word with a British word).
   b) In the UK, you wear trousers; in the US, you wear _____. (Fill in the blank with appropriate word in American English).
   c) An application for the new job was sent by her. (Rewrite the sentence beginning with "She ...).
   d) The student wrote an interesting story. (Rewrite the sentence beginning with "An interesting story ...).

3. Answer as directed.
   a) My boss called backthe meeting because of heavy rain. (Correct the particle in the underlined phrasal verb).
   b) She takes offher father. Both love to read books.(Correct the particle in the underlined phrasal verb).
   c) Each one of those books ___ (is/are) a classic. (Fill in the blank with correct form of the verb given in brackets.)
   d) Here is my car keys. (Correct the verb form).

4. Answer as directed.
   a) The idiom "to see red" means _____.
   b) The idiom "no bed of roses" means _____.
   c) _____ (Although/In spite of) we started late, we still arrived in time. (Choose the appropriate connective.)
   d) It's very hot. Turn on the air conditioner. (Combine the two sentences into one using an appropriate connective.)

5. Answer as directed.
   a) To 'hammer out a deal' is to _____ (reach/come across) a deal. (Choose the appropriate option).
   b) The term used to describe sensational news reporting is _____(yellow journalism/ trial balloons.)(Choose the appropriate option).

c) They wanted to know what was my name? (Correct the sentence).
d) My sister said, "I don't like sugar in my coffee." (Change into reported speech).

6. Answer the following:
   a) "O why lament its fall?" Whose fall is Bronte referring to in the poem "Life"?
   b) According to Bronte's "Life", why should we not lose hope?
   c) What was the 'mistake' of the aerial messenger in the story "A Wrong Ma Workers' Paradise"?
   d) In "A Wrong Man in Workers' Paradise," what did the girl do after taking home painted pitcher?
7. Answer the following:
   a) In the poem "Punishment in Kindergarten", why was the speaker called a pec girl?
   b) Who was the "blue-frocked woman" in the poem "Punishment in Kindergarten"?
   c) According to R.K. Narayan, which country has given up formalism in the use of
   d) Who, according to R.K. Narayan, has used English so far in India?
8. Answer the following:
   a) In "As I Grew Older", what does Hughes compare his dream to?
   b) What made Hughes forget his dream?
   c) What, according to Ambedkar, is social democracy?
   c) What according to Ambedkar are the "two things" that are completely absent in Indian society?

PART – B (5 x 12 = 60 Marks)

Answer the following in about 300 words each.

9. **a.** Explain the attitude to life that Charlotte Bronte recommends in the poem "Life".

OR

b. Discuss Tagore's use of irony in "A Wrong Man in Workers' Paradise".

10. **a.** What was the punishment given to the girl in "Punishment in Kindergarten"? Why did she consider it a punishment?

OR

b. How and when, according to Narayan, will a Bharat brand of English emerge in Inc

11. **a.** Bring out the central idea of the poem "As I Grew Older".

OR

b. What, according to Dr. Ambedkar, are the three things that India must do in orde remain a democracy?

12. **a.** Write a discursive essay on "True Friendship".

OR

b. Write an argumentative essay on the topic "Advertisements benefit the manufactu not the customer".

13. **a.** Write a progress report on your collection of data about school dropouts in the colonies around your college.

OR

b. Write a media report on: Students take out a rally in support of boycotting boycotts

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Code No. 228 / E

FACULTIES OF ARTS AND SCIENCE

B.A. / B.Sc. I-Semester (CBCS) Examination, December 2016

Subject : Mathematics

Paper – I : Differential Calculus

Time : 3 Hours **Max. Marks: 80**

PART – A (5 x 4 = 20 Marks)
(Short Answer Type)
Note : Answer any FIVE of the following questions.

1 Expand f(x) = log (1 + sinx) by using Maclaurin's theorem.

2 Find the c value of Rolle's mean value theorem for the function $f(x) = \log\left(\frac{x^2+ab}{x(a+b)}\right)$ on [a, b].

3 Evaluate $\lim_{x\to 0}(\cot x)^{\sin x}$.

4 Find the radius of curvature of the curve
$x = a\cos^3 t$, $y = b\sin^3 t$ at $t = \pi/4$.

5 If $z = \log(u^2 + v)$, $u = e^{x+y^2}$, $v = x + y^2$ then evaluate $2y\frac{\partial z}{\partial x} - \frac{\partial z}{\partial y}$

6 If $u = Tan^{-1}\left(\frac{y^2}{x}\right)$ then evaluate

$$x^2\frac{\partial^2 u}{\partial x^2} + 2xy\frac{\partial^2 u}{\partial x \partial y} + y^2\frac{\partial^2 u}{\partial y^2}$$

7 Find the asymptotes of the curve $x^2y^2 - x^2y - xy^2 + x + y + 1 = 0$, which are parallel to coordinate axes.

8 Find the envelope of the curve.
$my + m^2x - 10 = 0$ where m is a parameter.

PART – B (4 x 15 = 60 Marks)
(Essay Answer Type)
Note: Answer ALL the questions.

9 (a) (i) $y = a\cos(\log x) + b\sin(\log x)$ then show that
$x^2y_{n+2} + (2n + 1)xy_{n+1} + (n^2+1)y_n = 0$

(ii) Find the coefficient of x^5 in Maclaurin's series expansion of $f(x)=e^x\cos x$.

OR

(b) (i) State and prove Cauchy's mean value theorem. Hence find 'c' value of Cauchy's mean value theorem for the function $f(x)=e^x$, $g(x) = e^{-x}$ on [a, b].

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10 (a) (i) Find the curvature, the radius of curvature and the centre of the circle of curvature and the circle of curvature for the curve $x^2 = 4ay$ at P(2a, a).

(ii) Find the evolute of the parabola $y^2 = 4ax$.

OR

(b) (i) Evaluate $\lim_{x\to 0} \frac{(1+x)^{1/x} - e + \frac{ex}{2}}{x^2}$.

(ii) Find the value of a and b so that

$$\lim_{x\to 0} \frac{x(1+a\cos x) - b\sin x}{x^2} = 1$$

11 (a) (i) If $f(x,y) = \begin{cases} \frac{xy(x^2-y^2)}{x^2+y^2}, & (x,y) \neq (0,0) \\ 0 \quad , & (x,y) = (0,0) \end{cases}$

then show that $f_{xy}(0,0) \neq f_{yx}(0,0)$.

(ii) If $u = \log(x^3 + y^3 + z^3 - 3xyz)$ then show that $\frac{\partial u}{\partial x} + \frac{\partial u}{\partial y} + \frac{\partial u}{\partial z} = \frac{3}{x+y+z}$

OR

(b) (i) State and prove Euler's theorem for a homogeneous function.

(ii) Explain $f(x,y) = x^2y + 3y - 2$ in terms $x+1, y-2$ as a Taylor series.

12 (a) (i) Find the minimum value of $x^2 + y^2 + z^2$ subject to the condition $xyz = a^3$ where a > 0.

(ii) Discuss the maximum and minimum values of

$$f(x,y) = xy + \frac{9}{x} + \frac{3}{y}$$

OR

(b) Find the asymptoptes of the curve.

$$x^3 + 2x^2y - xy^2 - 2y^3 + xy - y^2 - 1 = 0$$

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Code No. 2017 / E

FACULTIES OF ARTS AND SCIENCE

B.A. / B.Sc. I – Year Examination, March / April 2016

Subject : MATHEMATICS

Paper – I : Differential Equations and Solid Geometry

Time : 3 hours Max. Marks : 100

Note : Answer Six questions from Part-A & Four questions from Part-B. Choosing at least one from each Unit. Each question in Part-A carries 6 marks and in Part-B carries 16 marks.

Part – A (6 X 6 = 36 Marks)

Unit - I

1 Solve $\sec^2 y \frac{dy}{dx} + 2x\tan y = x^3$.

2 Find the orthogonal trajectories of the family of rectangular hyperbolas $y = c_1/x$.

Unit – II

3 Solve $y'' + 3y' + 2y = 12e^x$

4 Solve $(D^2 - 3D + 2)y = 3\sin 2x$.

Unit - III

5 Find the equation of the plane which passes through the points (-1, 1, 1), (1, -1, 1) and (1, 1, -1).

6 Find the point where the line joining (2, -3, 1), (3, -4, -5) cuts the plane $2x + y + z = 7$.

Unit - IV

7 Find the equation of the cone whose vertex is at the origin and the direction cosines of whose generators satisfy the relation $3\ell^2 - 4m^2 + 5n^2 = 0$.

8 Find the equation of the cylinder whose generators are parallel to the line $\frac{x}{1} = \frac{y}{-2} = \frac{z}{3}$ and whose guiding curve is the ellipse $x^2 + 2y^2 = 1, z = 0$.

Part – B (4 X 16 = 64 Marks)

Unit - I

9 a) Prove that the integrating factor of non-exact differential equation $Mdx+Ndy=0$ is $1/Mx+Ny$ if the differential equation is homogeneous and $Mx + Ny \neq 0$.

b) Solve $(1+y^2)dx = (\tan^{-1}y - x)dy$.

10 a) Explain the method of solving Clairaut's equation $y = px + f(p)$

b) Solve $(x^2 + y^2 + 2x)\,dx + 2y\,dy = 0$

Unit - II

11 a) Explain the method of solving second order Cauchy Euler equation $a_2x^2\frac{d^2y}{dx^2}+a_1x\frac{dy}{dx}+a_0y=Q(x)$ where a_0, a_1 and a_2 are constants which are non-zero.

b) Solve $(D^2-3D+2)y=xe^{2x}+\sin x$.

12 a) Solve $(D^2+4D+4)\,y = 4x^2 + 6e^x$ by undetermined coefficients.

b) Apply method of variation of parameters to solve $(D^2 - 2D)\,y = e^x \sin x$.

Unit - III

13 a) A variable plane is at a constant distance 3p from the origin and meets the axes in A, B and C. Show that the locus of the centroid of the triangle ABC is $x^{-2} + y^{-2} + z^{-2} = p^{-2}$

b) Find the shortest distance between the lines $\frac{x-1}{2}=\frac{y-2}{3}=\frac{z-3}{3}$ and $\frac{x-2}{3}=\frac{y-3}{4}=\frac{z-4}{5}$.

14 a) Find the equation of the sphere which pass through the points (0,0,0), (0,1,-1), (-1,2,0) and (1,2,3).

b) Find the equation of the sphere which pass through the circle $x^2+y^2+z^2=5, x+2y+3z=3$ and touch the plane $4x + 3y = 15$.

Unit - IV

15 a) Prove that $2x^2 + 2y^2 + 7z^2 - 10yz - 10zx + 2x + 2y + 26z - 17 = 0$ represents a cone with vertex at (2,2,1).

b) Find the angle between the lines of intersection of $4x - y - 5z = 0$ and $8yz + 3zx - 5xy = 0$.

16 a) Find the equation of the cylinder whose generators touch the sphere $x^2 + y^2 + z^2 = a^2$ and are parallel to the line $\frac{x}{\ell}=\frac{y}{m}=\frac{z}{n}$.

b) Find the equation of the right circular cylinder of radius 3 and whose axis is the line $\frac{x-1}{2}=\frac{y-3}{2}=\frac{5-z}{7}$.

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Code No. 5027 / E

FACULTIES OF ARTS AND SCIENCE

B.A. / B.Sc. III – Year Examination, March / April 2015

Subject : STATISTICS (Theory)

Paper – III

Applied Statistics

Time : 3 hours **Max. Marks : 100**

Note : Answer all questions. Answer questions I to IV by choosing any two from each and any three from question V. All questions carry equal marks. Scientific calculators are allowed.

I 1 What is a sample survey? Discuss briefly the basic principles of a sample survey.

2 Derive the variances of sample mean in case of SRSWOR and SRSWR, compare and comment.

3 Describe the procedure of stratified random sampling. Which of the following two is an unbiased estimator of the population mean.

i) $\frac{\sum_i ni\,\bar{y}_{ni}}{\sum_i Wi}$ ii) $\frac{\sum_i Ni\,\bar{y}_{ni}}{\sum_i Ni}$

State the variance of the unbiased estimator.

4 Prove that systematic sampling will yield better results only if the units within the sample are heterogeneous.

II 5 Explain the meaning of 'Analysis of variance' technique. State assumptions and applications of it.

6 Identify the given type of design and describe the analysis appropriate for this design.

A	B	C	D
E	A	B	C
D	E	A	B
C	D	E	A
B	C	D	E

7 Derive an expression to measure the efficiency of RBD relative to CRD.

8 Explain basic principles of experimentation. How for these principles are met in LSD discuss.

III 9 Define a time series. Explain briefly the components of time series.

10 Explain functions and organization of NSSO.

11 What is an index number. S.T. Fisher's index number is an ideal index number.

12 Fit a logistic curve $y = \frac{K}{1+e^{a+bt}}$ by the method of three selection points.

IV 13 a) Explain price and income elasticities of demand.

b) Find the equilibrium price and quantity exchanged, for the demand curve $d = 250 - 3P^2$ and supply curve $S = P^2 + 2P^4$.

14 a) Define a life table, complete life table, and abridged life table.

b) Fill the blanks in the following life table

Age x :	ℓx	dx	px	fx	Lx	Tx	e_x^0	mx
30 :	762227	-	-	-	-	27296632	-	-
31 :	758580							

15 Define the term vital statistics. Describe the methods of collection of vital statistics.

16 Explain Pigou's method for time series data.

V Write short notes on any **three** of the following :

17 Random numbers method

18 Missing plot techniques in LSD

19 Cost of living index number

20 CSO and its functionalities

21 Death and birth rates

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