

**FACULTY OF ENGINEERING****B.E. II-Semester (AICTE) (Backlog) Examination, July 2021****Subject: English****(Common to all branches)****Time: 2 hours****Max. Marks: 70****Note: Missing data, if any may be suitably assumed.****PART – A****Answer any five questions.****(5x2 = 10 Marks)****1 Fill in the blanks with:**

- This book has won\_\_\_\_\_ Booker Prize. (Articles)
- A few days after the accident she died \_\_\_\_\_ the injuries. (preposition)
- \_\_\_\_\_ his ideas are quite interesting. (determiners)
- I am having \_\_\_\_\_ trouble passing my driving exam. (determiners)

**2 Fill in the blanks with appropriate affixes:**

- \_\_\_\_\_ + agree
- \_\_\_\_\_ + legal
- Like+\_\_\_\_\_
- champion+\_\_\_\_\_

**3 a. Give the constituent words of the compound words:**

- keyboard
- shipwreck

**b. Give the blends of the following words:**

- biographical+picture
- web+seminar

**4 a. Choose the appropriate transitions to complete the sentences:**

- We have already complained about your merchandise; it is \_\_\_\_\_ of inferior quality.  
a) Obviously    b) Beside    c) Still    d) Furthermore
- He feels like giving up his job, \_\_\_\_\_ of the consequences he will face.  
a) Despite    b) In spite    c) As a result    d) Regardless of

**b. Fill in the blanks with appropriate Connectives given below:**

- Nevertheless    b) Although    c) As long as    d) Until
  - You can keep those project samples \_\_\_\_\_ you like.
  - They managed to complete the project \_\_\_\_\_ there wasn't much time left.

5 a. Choose the correct synonym for the underlined word:

i. It was a momentous occasion in the history of the nation.

- a) insignificant    b) important    c) sudden    d) transient

b. Choose the correct antonym for the underlined word:

i. His attitude to poor people is deplorable.

- a) commendable    b) miserable    c) desirable    d) equitable

c. Give a one-word substitute:

i. A person with a positive outlook on life.

ii. A form of government with a monarch at the head.

6 Transform the following substitute:

a. He is writing a book on Robotics. (convert into Passive)

b. Let him be given some money. (convert into Active)

7 Transform the following sentences:

i. He asked, "When do you intend to make the payment?" (change into Indirect speech)

ii. He asked me whether I played golf. (change into Direct speech)

8 Which word best completes the sentence?

a. A \_\_\_\_\_ is a narrow passage of water.

- i) straight    ii) strait

b. The children told \_\_\_\_\_ mother a lie.

- i) their    ii) there    iii) they're

9 Fill in the blanks with the correct form of the verbs given in the brackets:

i. Everyone \_\_\_\_\_ (want) to succeed.

ii. Kevin \_\_\_\_\_ (do) all the work here.

10 Match the following word in Column A with related words in Column B:

A	B
1 terse	a an uncontrolled fire
2 flout	b appreciate
3 conflagration	c disobey
4 appropriate	d concise
	e poor
	f proper

**PART – B****Answer any four questions.****(4x15 = 60 Marks)**

- 11 a) Justify the title of R.K. Narayan's short story "A Horse and Two Goats".  
 b) **Expand the outline and write a paragraph in about 150 words:**

A rich farmer – lot of land – cattle and servants – two sons – happy life – After some years younger son unhappy – asked for his share of the property – wouldn't listen to father's advice – got his share – sold them all – went way to another country – fell into bad ways – soon all money gone – poor – no one to help him – understood his mistake.

- 12 a) **Read the lines and explain them briefly in 150 words:**

"If you can talk with crowds and keep your virtue,  
 Or walk with Kings – nor lose the common touch,  
 If neither foes nor loving friends can hurt you,  
 If all men count with you, but none too much"

- b) Write the paragraph in about 150 words on '**The Importance of Sports**'

- 13 a) Read the passage by Martin Luther King Jr....I Have a Dream. Discuss the dreams expressed by him in the given excerpt.

I have a dream that one day this nation will rise up and live out the true meaning of its creed: "We hold these truths to be self-evident; that all men are created equal."

I have a dream that one day on the red hills of Georgia the sons of former slaves and the sons of former slave owners will be able to sit down together at the table of brotherhood.

I have a dream that one day even the state of Mississippi, a state sweltering with the heat of injustice, sweltering with the heat of oppression, will be transformed into an oasis of freedom and justice.

I have a dream that my four little children will one day live in a nation where they will not be judged by the color of their skin but by the content of their character.

I have a dream today.

I have a dream that one day down in Alabama, with its vicious racists, with its governor having his lips dripping with the words of interposition and multifaceted, that one day right down in Alabama little black boys and black girls will be able to join hands with little white boys and white girls as sisters and brothers.

- b) Write a letter to the internet service provider in your area complaining about frequent disruption of internet connection:

- 14 a) What is the initial conflict of the poem "The Road Not Taken" by Robert Frost? How does the traveler come to a decision about what to do?  
b) Write a report on the Traffic problems in Hyderabad.
- 15 a) **Read the following passage and explain the themes present in it in 150 words:**  
"Nearly all the sports practiced nowadays are competitive. You play to win, and the game has little meaning unless you do your utmost to win. On the village green, where you pick up sides and no feeling of local patriotism is involved. It is possible to play simply for the fun and exercise: but as soon as the question of prestige arises, as soon as you feel that you and some larger unit will be disgraced if you lose, the most savage combative instincts are aroused. Anyone who has played even in a school football match knows this. At the international level sport is frankly mimic warfare."  
b) Write a statement of Purpose in about 150 words to the admissions committee of a reputed technical institution, seeking admission into a research program.
- 16 a) **Answer in about 150 words each:**  
i. Explain the symbolism in Robert Frost's poem "The Road Not Taken."  
**OR**  
ii. This is our hope. This is the faith that I will go back to the South with. With this faith we will be able to hew out of the mountain of despair a stone of hope. With this faith we will be able to transform the jangling discords of our nation into a beautiful symphony of brotherhood. What hope and faith are expressed by Martin Luther King in these lines?  
b) **Answer in about 150 words each:**  
i. According to the essay "The Sporting Spirit", what does sporting spirit lead to?  
**OR**  
ii. Comment on the central theme of Rudyard Kipling's poem "If".
- 17 a) Arrange the following jumbled sentences to make a meaningful paragraph.  
Identify the correct order from the options given below:  
1. He cannot achieve wealth and fortune unless he works hard and unless he has a powerful will.  
2. It follows from it that he is the builder of his own fortune.  
3. A person must be persevering and must exert himself if he wants to shape out his destiny.  
4. He can also bring misery and sufferings upon himself if he has not the wish to labour.  
5. He can make his fortune if he wishes to do so by being industrious and persevering  
i). AEDBC ii). CABED iii). CBEAD iv). EADCB

**b) Read the passage and answer the questions that follow:**

There was a bird that loved to listen to the other birds sing and thought, "I wish I could sing like that, too." But, the bird was unable to sing. All that the bird could do was make little clicking sounds, and it could make a sound like the wind. Nothing happened when the bird tried to sing, just a "click, click, click, whoosh" sound came out. All the other birds laughed and laughed at her. They all joined in and taunted., "Birds of a feather flock together. Even though you have feathers. You're not like us, so you can't be part of our flock." "Oh dear," sighed the bird.

She sat in her tree and worried. She wasn't exactly sure what a flock was, but she knew the other birds laughed at her, and she knew it was because she was different. The bird said to herself, "No other birds will want to be my friends because they all think I'm strange." Every day the bird tried so hard to sing, but every day she just made the same clicking sound.

One day, while perched in the forest, the bird heard a new sound – the sound of people talking. The bird stopped and listened intently. Then, something very strange happened. The bird discovered she could talk, too. A man said, "Look at all the beautiful trees." Then the bird also said, "Look at all the beautiful trees." Another man asked, surprised, "Did you just hear that bird? It talked!" The bird repeated, "Did you just hear that bird? It talked!" Now, all the people in the forest stopped to listen to the bird speak. One person would say something, and then the bird would echo what he had said. The people left, saying "What a special bird!" They heard, "What a special bird!" as they walked out of the forest. The bird had followed them. Every day after that, people would come to the forest, and the bird would repeat what they said.

Now, all the other birds looked at her differently. "You're our hero," they stated. "You're such a special bird." After that day in the forest, the bird had many friends. She still couldn't sing, but she could talk. Although she was different, she and the other birds agreed that different was special. Being different felt very good. One bird said, "Being different is like being a diamond. There are many rocks, but there are not many diamonds. Sometimes you don't see how bright a diamond is at first. Now, we see how great you are. You are our diamond."

1. What was the bird's wish? Was it fulfilled?
2. How did the other birds react when the bird tried to sing?
3. Explain the meaning of the phrase "Birds of a feather flock together."
4. Why did the attitude of the other birds change towards the bird?
5. Discuss the main idea conveyed by the story?

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**FACULTY OF ENGINEERING**  
**BE II - Semester (CBCS) (Backlog) Examination, July 2021**

**Subject: Engineering Mathematics-II**

**Time: 2 Hours**

**Max .Marks: 70**

**Note: Missing data, if any, may be suitably assumed**  
**PART – A**

**Answer any five questions.**

**(5x2=10 Marks)**

- 1 Solve  $(xe^{-xy} + 2y) dy + ye^{-xy} dx = 0$ .
- 2 Solve  $y' + 2xy = xe^{-x^2}$ .
- 3 Solve  $y'' - 20y' + 96y = 0$ .
- 4 Find a particular integral of the differential equation  $2y'' + 7y' - 4y = xe^{-4x}$ .
- 5 Find the power series solution of  $(1+x)y' + xy = 0$  about  $x = 0$ .
- 6 Express  $f(x) = 4x^3 + 5x^2 - 6x + 7$  in terms of Legendre polynomials.
- 7 Evaluate  $\int_0^{\infty} t^4 e^{-2t^2} dt$ .
- 8 Evaluate  $\frac{d}{dx} [\operatorname{erf}(ax)]$ .
- 9 Evaluate  $L\{(t+2)^2 e^{-t} + \sin 3t\}$ .
- 10 Evaluate  $L^{-1} \left\{ \frac{1}{(s+4)^2} \right\}$ .

**PART – B**

**Answer any four questions.**

**(4x15= 60 Marks)**

- 11 (a) Solve  $xy dx + (x^2 + 2y^2 + 2) dy = 0$ .  
 (b) Find the general solution and singular solution of the differential equation  $y = x y' - \frac{1}{y'}$ .
- 12 (a) Solve  $y'' + 4y' + 3y = e^{2x} \cos x$ .  
 (b) Solve  $x^2 y'' + 5x y' - 5y = 24x \log x$ .
- 13 Find the Frobenius series solution about  $x=0$  of the equation  $x y'' + (1-2x)y' + (x-1)y = 0$ .
- 14 (a) Evaluate  $\int_0^{\infty} e^{-5x} (1 - e^{-x})^3 dx$ .  
 (b) Show that  $J_2'(x) = (1 - \frac{4}{x^2}) J_1(x) + \frac{2}{x} J_0(x)$ .
- 15 Using Laplace transform, solve  $y' + y = 1 + te^t$  where  $y(0) = 1$ .
- 16 (a) Using the method of variation of parameters, solve  $y'' + y = \csc x$ .  
 (b) Evaluate  $L^{-1} \left\{ \frac{7}{(2s+1)^3} + \frac{2s+5}{s^2+5s+6} \right\}$ .
- 17 (a) Show that  $(n+1) P_{n+1}(x) = (2n+1)x P_n(x) - n P_{n-1}(x)$ .  
 (b) Find the orthogonal trajectories of the family of curves  $x^2 = 4ay$ .