Question Booklet Number:

Applicant's Name: _____

Roll Number: ☐☐☐☐☐☐   **Application Number:** | A | P | U | 2 | 0 | E | C | O | ☐ | ☐ | ☐ |

Date: ☐☐☐☐ 2 0 2 0   **Test Centre:** _____

	Section Title	Question Type	No. of Questions	Question Nos.	Total Time *
Part I	1. Microeconomics	Multiple choice	10	1 to 10	**2 hours**
	2. Macroeconomics	Multiple choice	10	11 to 20	
	3. Quantitative methods	Multiple choice	10	21 to 30	
	4. Indian Economy and Political Economy	Multiple choice	10	31 to 40	
Part II	Essay Question	Answer BOTH the Essay Questions			**1 hour**

* Candidates shall be allowed to leave the examination hall only after 1 hour of the commencement of the Examination.

Please read the following instructions carefully:

1) The instructions given by the Examination Administrators and Invigilators must be followed. Violation of instructions will result in disqualification and the candidate will be asked to leave the Examination Hall. Any candidate found guilty of using unfair means of any nature inside the Examination Hall shall be liable to be disqualified.

2) Candidates are **NOT** allowed to carry any papers, notes, books, log tables, scientific calculators, scanning devices, communication devices like mobile phones to the Examination Hall. ONLY NON-SCIENTIFIC CALCULATORS ARE ALLOWED.

3) Before answering the questions, write your roll number in the space provided in the Question Booklet. On the OMR Answer Sheet, please fill in the necessary details and sign at the appropriate place.

4) Each multiple choice question carries one mark. There will be no NEGATIVE MARKING.

5) Each multiple choice question is followed by four options. Please mark the correct/most appropriate option by darkening the relevant OVAL with a BLUE/BLACK ball point pen on the OMR Answer Sheet. Darken ONLY ONE OVAL for each answer so that the letter inside the OVAL is not visible. **USE OF PENCILS IS PROHIBITED.** The CORRECT and INCORRECT methods of darkening an OVAL are shown here.
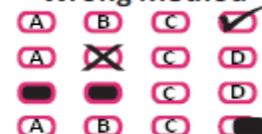
6) Please DO NOT make any stray marks anywhere on the OMR Answer Sheet. DO NOT fold or wrinkle the OMR Answer Sheet. Rough work MUST NOT be done on the OMR Answer Sheet. Use your question booklet for this purpose.

7) The Question Booklet and OMR sheet will be collected by the Invigilator after 2 hours from the commencement of the examination.

8) Essay Questions booklet will be distributed after 1 hour from the commencement of the examination.

9) In Part II, M.A. Economics programme aspirants have to write BOTH the Essay questions

10) After writing the Essay, please hand over the booklet to the Room Invigilator. DO NOT carry the question booklet or any part thereof outside the Examination Hall.

Section 1 - Microeconomics

No. of Questions: 10

1) Consider the following utility functions over two goods *x* and *y*.

$u1(x,y)=ax+by$

$u2(x,y)=x^a y^b$

$u3(x,y)=a\ ln(x) + b\ ln(y)$

Which of the three utility functions have the same marginal rates of substitution for any given values of *x* and *y*.

A) $u1(x,y)$ and $u2(x,y)$

B) $u2(x,y)$ and $u3(x,y)$

C) $u1(x,y)$ and $u3(x,y)$

D) None of the above

---

2) A social planner has a Utilitarian social welfare function. The planner assumes that all individuals in the society have identical utility functions with diminishing marginal utility of money i.e. the utility function is concave with respect to money. This implies that any transfer of money from the rich to the poor will

A) Increase social welfare

B) Decrease social welfare

C) Leave social welfare unchanged

D) Not enough information to determine the change in social welfare

---

3) Suppose a person choosing between fish (x) and money (y) has the following utility function:

$u(x, y) = y + 10x - x^2$

Let the price of fish be 2 and the price of money be 1. If the person has a budget of 30, find the amount of fish the person can buy to maximise their utility.

A) 8

B) 5

C) 4

D) 2

---

4) A tax increase will not cause any deadweight loss if

A) The supply is inelastic

B) The demand is inelastic

C) The tax is lumpsum

D) All of the above

5)

	H	M	L
h	2,2	3,3	4,4
m	3,5	5,1	2,4
l	4,2	2,2	5,3

The table above shows the payoff matrix between player 1 who chooses between strategies *h, m* and *l*, and player 2 who chooses between strategies *H, M* and *L.*

The first number in each cell denotes the payoff for player 1 and the second number denotes the payoff for player 2. We consider only pure strategies.

Select the correct statement:

A) The Nash equilibrium is (l,L) and it is Pareto efficient

B) The Nash equilibrium is (l,L) and it is not Pareto efficient

C) The Nash equilibrium is (h,L) and it is Pareto efficient

D) The Nash equilibrium is (h,L) and it is not Pareto efficient

---

6) A person was offered a choice between

(i) A lottery of Rs 100 with 50% probability and Rs 20 with 50% probability,
(ii) A sure amount of Rs 50
If the person chooses (ii), then according to the expected utility theory, the person is

A) Risk averse

B) Risk neutral

C) Risk loving

D) The person's risk preference cannot be inferred from the given information

---

7) Consider an indifference curve of a utility function of a consumer over two goods. Which of the following statement is true about the curve?

A) Utility increases as you move along the indifference curve from left to right

B) The point of intersection of two indifference curve is the optimal point of consumption

C) The slope of the indifference curve is equal to the marginal rate of substitution between the two goods

D) All of the above

8) Which of the following production functions has constant returns to scale?

A) $f1(l,k)=l^{0.3}k^{0.7}$
B) $f2(l,k)=l+2k$
C) $f3(l,k)=min\{3l,k\}$
D) All of the above

---

9) Assume that the price-elasticity of demand for adult footwear is relatively high, while the price-elasticity of demand for children's footwear is low. The elasticity of supply for both is the same. Now if GST on both adult's footwear and children's footwear is increased by five percentage points, what would happen to their prices?

A) Both their prices would increase by the same proportion
B) The price of adult footwear would see a higher proportional increase
C) The price of children's footwear would see a higher proportional increase
D) Prices would remain unchanged

---

10) Traffic is a big problem in Bangalore. A Pigouvian solution to the problem would be

A) A government law restricting the number of vehicle (like Delhi's odd-even rule)
B) A congestion charge to be paid by every vehicle in the city
C) Increase in the width of roads to accommodate more cars
D) All of the above

Section 2 - Macroeconomics

No. of Questions: 10

11) Suppose a 4-sector economy with

C=10+.8(Y-T), I=10, G=50, X=40, T=50 and M=10+.3Y

Where C, I, G, X, T and M refer to consumption, investment, government expenditure, exports, taxes and imports respectively. What is equilibrium income in this economy?

A) 170
B) 120
C) 200
D) 220

12) Monetary policy will have the largest effect on income when

A) The IS curve is steep and the LM curve is steep
B) The IS curve is flat and the LM curve is steep
C) The IS curve is flat and the LM curve is flat
D) The IS curve is steep and the LM curve is flat

13) From the Quantity Theory of Money if M increases by 5 percent and V increases by 2 percent, then

A) Real income increases by approximately 7 percent
B) The price level increases by approximately 5 percent
C) Nominal income increases by approximately 5 percent
D) Nominal income increases by approximately 7 percent

14) You observe that the government is increasing infrastructural spending. This could be a response to:

A) Higher unemployment
B) Slow Economic Growth
C) A recognized period of recession
D) All of the above

15) According to the Solow model, persistently rising output and living standards can only be explained by:

A) Capital accumulation
B) High savings rates
C) Population growth
D) Technological progress

16) What is the value of the multiplier in a closed economy with a Marginal Propensity to Save of 0.25?

A) 4
B) 1.33
C) 5
D) 1

17) The value today associated with receiving Rs. 100 two years from today when the annual interest rate is 5% is

A) Rs. 100
B) Rs. 90.7
C) Rs. 90
D) Rs 95.2

18) If the government increases its spending which of the following could occur?

A) Unemployment decreases
B) Inflation increases
C) The fiscal deficit rises
D) All of the above

19) Which of the following are possible consequences of a fiscal expansion?

A) An increase in the trade deficit
B) Deflation
C) A reduction in national income
D) A rise in unemployment

20) Which of the following is true?

A) Real GDP is always greater than Nominal GDP
B) Nominal GDP is always greater than Real GDP
C) Real GDP excludes some sectors counted in nominal GDP
D) Real GDP is lower than Nominal GDP if inflation is positive

Section 3 - Quantitative methods

21) Consider two random variables x and Y. Looking at the scatter between x and Y, the researcher contemplates the following population regression:

$$Y = \beta_0 + \beta_1 x^2 + \beta_2 x^3 + \beta_2 e^x + \varepsilon.$$

Which of the following statements is true:

A) OLS cannot be applied as the equation is cubic in x

B) OLS cannot be applied as the equation contains e^x term

C) OLS cannot be applied as the equation is cubic in x and contains e^x term

D) OLS can be applied despite cubic in x and e^x term

22) The degrees of freedom of the sample variance s^2, defined as $\frac{\sum(x_i - \bar{x})^2}{n}$ is

A) n

B) $n - 1$

C) $n - 2$

D) $\sqrt{n}$

23) Consider a sample of n observations. The sample proportion of a binary categorical variable coded as 0/1 can be seen as,

A) The sample median of the sequence of 1s and 0s

B) The sample mode of the sequence of 1s and 0s

C) The sample mean of the sequence of 1s and 0s

D) None of the above

24) Please refer to the figure below:

| Negatively Skewed | Normal (no skew) | Positively Skewed |

Negative Direction | The normal curve represents a perfectly symmetrical distribution | Positive direction
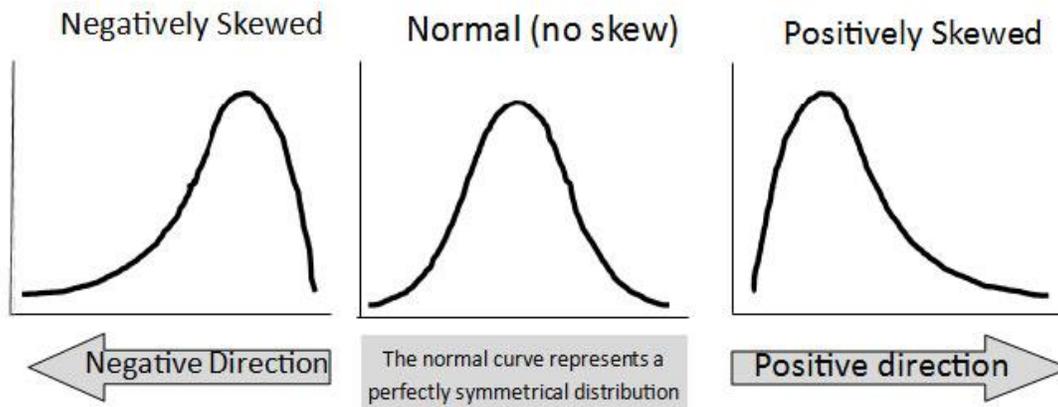
A) The mean and the median are the same value for all three plots

B) The mean is lower than median for the plot on the left (marked Negative Direction), while it is higher than median for plot on the right (marked Positive direction)

C) The mean is higher than median for the plot on the left (marked Negative Direction), while it is lower than median for plot on the right (marked Positive direction)

D) The mean and median cannot be the same value for all three plots shown above

25) In set theory, if A and B are independent events, it follows that:

A) A and B' (B complement) are independent
B) $P(A \cap B) = P(A) + P(B)$
C) $P(A \cap B) = P(A/B)$
D) All of the above

26) An oil exploration company currently has two active projects, one in Asia and the other in Europe such that the success of each project is independent of the other project. The probability that the Asian project is successful is 0.4, and the probability that the European project is successful is 0.7. Suppose you are told that the Asian project is not successful. Then, the probability that the European project is also not successful is,

A) 0.7
B) 0.28
C) 0.3
D) Indeterminate (cannot be specified)

27) In the context of hypothesis testing consider the following three statements:

i. Even if the sample weakly contradicts the null hypothesis, the null hypothesis will be rejected.
ii. Only if the sample strongly contradicts the null hypothesis, the null hypothesis will be rejected
iii. The researcher approaches a test, assuming the null hypothesis to be true.

Which of the following is true

A) Only i. is correct
B) Only ii. is correct
C) Both i. and iii. are correct
D) Both ii. and iii. are correct

28) Consider the following regression equation:

$Y = \beta_0 + \beta_1 x^2 + \beta_2(x * z) + \varepsilon.$

Which of the following statements is true assuming this is the correct population equation:

A) The partial effect z is given by $2\beta_1 x + \beta_2 x$
B) The partial effect z is given by $2\beta_1 x + \beta_2$
C) The partial effect z is given by $\beta_2 x$
D) The partial effect z is given by β_2

---

29) If random variable X follows Poisson Distribution and random variable Y follows Binomial Distribution, then

A) X must be discrete and Y must be continuous
B) X must be continuous and Y must be discrete
C) X and Y must both be discrete
D) X and Y must both be continuous

---

30) A family has moved into a new neighborhood. The neighborhood has two medical clinics. Each medical clinic has two obstetricians and three pediatricians. The family requires the services of both types of doctors but is constrained to choose both doctors from the same clinic. In how many ways can this been done?

A) 10
B) 8
C) 36
D) 12

## Section 4 - Indian Economy and Political Economy

No. of Questions: 10

31) The poverty head count ratio measures

A) The depth of poverty below the poverty line
B) The percentage of people living below the poverty line
C) The number of people living below the poverty line
D) The amount of inequality between the rich and the poor

32) The term "jobless growth" refers to

A) A rise in proportion of women out of the labour force
B) A strong rise in unemployment accompanied by strong GDP growth
C) A strong rise in the youth unemployment rate despite high GDP growth
D) A weak rise in employment despite high GDP growth

33) Until recently, the Indian economy followed the five year plan model of planning, which means that the government makes plans which are adhered to for five years. However, Indira Gandhi suspended five year plans and followed annual budgets from 1966-69. Why did she do this?

A) Congress did not have a majority government in the Lok Sabha
B) Food shortages and a sharp spike in inflation caused by monsoon failures
C) Threat of Maoist and Naxalite movements
D) War between India and Pakistan

34) In India

A) The smallest proportion of workers are in the agricultural sector, but this sector has the highest contribution to GDP
B) The highest proportion of workers are in the agricultural sector, but this sector has the lowest contribution to GDP
C) The highest proportion of workers are in the agricultural sector and this sector has the highest contribution to GDP
D) The smallest proportion of workers are in the agricultural sector and this sector has the lowest contribution to GDP

35) What is the aim of Ayushman Bharat Yojna – National Health Protection scheme

A) Health care insurance coverage for scheduled caste, scheduled tribe and low income households
B) Free health care of all Indian citizens
C) Subsidization of hospital charges for low income households
D) Free checkup in public hospitals

36) In 2005 the Government of India introduced a programme that guaranteed 100 days of employment per year per household in rural areas. What is the name of this programme?

A) Sampoorn Grameen Rozgar Yojana (SGRY)
B) National Rural Employment Guarantee Act (NREGA) which was later renamed the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)
C) National Rural Livelihoods Mission (NRLM)
D) Skill India Mission

37) After liberal reforms were introduced in 1991, the government decided to dis-invest public sector enterprises (PSE). What does dis-investment mean in this context?

A) Allowing private companies to invest in sectors which were only controlled by PSE's like tele-communication
B) The selling of government equity in public sector undertakings
C) Selling off assets of PSE to private companies
D) Shutting down Public Sector Enterprises

38) This graph on wages and productivity for India shows
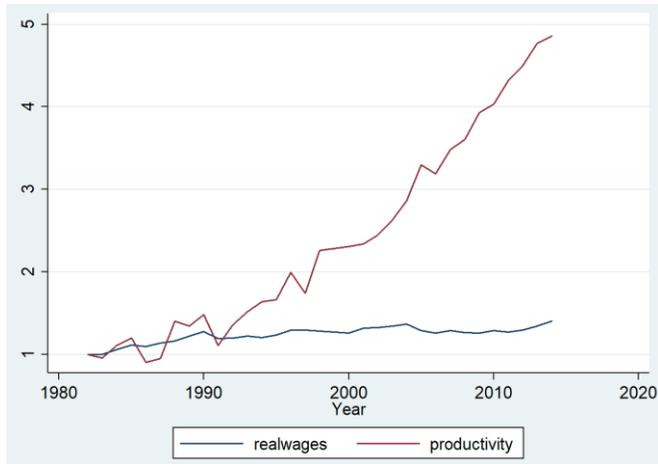
A) productivity gains have NOT been associated with proportionate rises in real wages
B) productivity gains have been associated with proportionate rises in real wages
C) productivity gains have been associated with rising formalization of work
D) productivity gains have been associated with the rise of women in the work force

39) Work in India is characterized by

A) the majority of workers in the organized sector
B) the majority of workers in the unorganized sector
C) the majority of workers out of the labour force
D) the majority of women entering the paid labour force

40) The Gender Wage Gap refers to...

A) Average difference in wages (or remuneration) of women compared to men who are working
B) Average difference in time spent working of women compared to men
C) Standard deviation of wages for women compared to men
D) Difference between the highest paid women workers and the highest paid male workers

Space for Rough Work

Space for Rough Work

Space for Rough Work