DSE 2007 Answer Key
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1.(c) (20, 0)

2.(b) a vertical line

3.(b) $K = 3L/2$

4.(c) MR < 0 in such a case

5.(a) A, B

6.(b) inflation is contant

7.(d) change the composition of monetary base

8.(a) always reduce borrowing

9.(a) improve it in the short run

10.(a) only raises the price level and the interest rate

11.(a) $f(x) = x^2$

12.(c) $det(A) = det(B)$

13.(b) $Df(x) = 0$ for some $x \in \mathbb{R}$

14.(d) In every legislature and every party, there exists a legislator who does not pay taxes

15.(c) singular

16.(b) 2/5

17.(c) increases steadily from 0 to 1

18.(d) 4/7

19.(b) (i) 0.16; (ii) 0.29

20.(c) 7.5

21.(c) $1200 - 488L + 72L^2 - 4L^3$

22.(d) (i) Rs. 4,80,000 and (ii) risk-averse

23.(a) (i) 1 km and (ii) Rs. 100

24.(a) Some firms will exit the industry, but the others will remain

25.(b) 9 apples

26.(a) 3.5 kg

27.(d) $((0,0), (\sqrt{8}, 2), (3 - \sqrt{8}, 1))$

28.(c) Pareto efficient, because there is a bound on Agent 1's ability to consume

29.(b) $\sqrt{2}$

30.(c) $((0,0), (0, 3 - \sqrt{3}), (3, \sqrt{3}))$

31.(e) $\dfrac{\lambda}{\alpha(1 + \lambda)}$

32.(b) $\dfrac{P}{P^e} = 1 + \lambda$

33.(a) an increase in the actual price level

34.(b) a decrease in the actual price level

35.(a) $\dfrac{\beta_2}{[1 - (\alpha_1 + \beta_1)]}$ units

36.(c) $\dfrac{1}{[1 - (\alpha_1 + \beta_1) + (\gamma_1 \beta_2)/\gamma_2]}$

37.(c) $(1 + \delta)w_2 > (1 + r)w_1$

38.(a) goes up

39.(c) Country 1 has a higher equilibrium level of output than country 2 and it runs a trade surplus vis-a-vis Country 2

40.(b) (i) and (ii) remain unchanged; (iii) depreciates

41.(a) $\{(x, r) | f(x) \le r\}$ is convex

42.(a) $2xe^{x^2} - e^x$

43.(d) converges to neither 1 nor -1

44.(d) $[-1, 1]$

45.(c) $(-1, 1)$

46.(d) $d(x, z) \le d(x, y) + d(y, z)$

47.(b) $(A - B) \times C = (A \times C) - (B \times C)$

48.(c) Attains a saddle point

49.(c) 4.5

50.(d) During warm weather, my crops suffer from pests more than during cooler weather. Therefore, a warm environment must help pests to multiply.

51.(d) None of the above

52.(e) $\dfrac{3!3!}{6!}$

53.(b) $\dfrac{5}{18}$

54.(b) $(1/2, 3/4, 1/2)$

55.(b) 37.6 years

56.(a) 0.025

57.(d) 5, 0.5, 39

58.(d) 0.79

59.(b) There is a significant difference in the performance of the classes at the 5% level but no significant difference at the 1% level of significance

60.(b) There is no significant difference between the districts and the candidate is preferred in district A

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