เฉลยแบบทดสอบ MAN POWER ANALYSIS

1. Given: A TFS (Tactical Fighter Squadron) has 15 aircraft in-commissioned with a utilization rate of 3,000 flying hours per year and average flight duration of 1 flying hour per landing. The aircraft maintenance program is as follows:

Organization Level:

a. Preflight; EOR (End of Runway) Check; Post flight to be performed before each flight, EOR and after the last flight of the day respectively.

b. 100 Hours Inspection: to be performed at every 100 flying hours (+ 10 % escalation where necessary).

Intermediate Level:

a. 300 Hours Inspection: to be performed at every 300 flying hours (+ 10 % escalation where necessary). The 300 Hours Insp. shall include 100 Hours Insp. tasks.

The aircraft maintenance matrix is shown in the figure below. The Break Rate (B/R) is 20 %. Data related to crew size, elapsed time and man hours are also shown.

INSP \ HRS	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000	CREW SIZE	ELAPSED TIME	TOTAL MH / INSP	NO. OF INSP / YR	TOTAL MH / YR
O - LEVEL																																			
PREFLIGHT																															3	1	3	3,000	A
EOR																															2	0.1	0.2	3,000	B
POSTFLIGHT																															4	1	4	3,000	C
100 (O - LEVEL)	1	2		3	4		5	6		7	8		9	10		11	12		13	14		15	16		17	18		19	20		8	24	192	20	D
UNSCHED	BREAK RATE 20 % = (3,000 * 20/100) = 600 UNSCHED; CREW SIZE = 4; ELAPSED TIME = 8 HRS; TOTAL MH / UNSCHED = 32																														4	8	32	600	E
																															O - LEVEL TOTAL MAN HOURS / YEAR				F
																															1 MAN YEAR = 1,446 MAN HOURS				G
																															OPTIMUM MAN POWER FOR O - LEVEL				H
I - LEVEL																																			
300 (I - LEVEL)			1			2			3			4			5			6			7			8			9			10	18	100	1,800	10	I
ADDITIONAL WORK	ADD WORK = 1,200 MH / INSP																																1,200	10	J
BACKSHOP	BACK SHOP = 800 MH / INSP																																800	10	K
SE & AGE MAINT.	SUPPORT EQUIPMENT & AGE MAINTENANCE = 8,000 MH / YEAR																																		L
																															I - LEVEL TOTAL MAN HOURS / YEAR				M
																															1 MAN YEAR = 1,446 MAN HOURS				N
																															OPTIMUM MAN POWER FOR O - LEVEL				O

From the given data above, answer the following questions:

1. How many man hours are required for Preflight Inspection within 1 year (column A) ?

    a. 3,000 man hours

    b. 6,000 man hours

c. 8,000 man hours

d. 9,000 man hours

2. How many man hours are required for EOR Inspection within 1 year (column B) ?

a. 600 man hours

b. 300 man hours

c. 900 man hours

d. 1,200 man hours

3. How many man hours are required for Post flight Inspection within 1 year (column C) ?

a. 10,000 man hours

b. 12,000 man hours

c. 14,000 man hours

d. 16,000 man hours

4. How many man hours are required for 100 Hours Inspection within 1 year (column D) ?

a. 3,000 man hours

b. 3,600 man hours

c. 3,840 man hours

d. 3,900 man hours

5. How many man hours are required for unscheduled maintenance within 1 year (column E) ?

a. 18,200 man hours

b. 19,000 man hours

c. 19,200 man hours

d. 20,200 man hours

6. How many man hours are required for O - Level maintenance within 1 year (column F) ?

a. 48,540 man hours

b. 45,540 man hours

c. 43,640 man hours

d. 44,640 man hours

7. What is the number of optimum man power for O – Level maintenance (column H) ?

a. 44,640 / 1,446

b. 43,640 / 1,446

c. 45,540 / 1,446

d. 48,540 / 1,446

8. How many man hours are required for 300 Hours Inspection within 1 year (column I) ?

a. 16,000 man hours

b. 18,000 man hours

c. 15,000 man hours

d. 16,500 man hours

9. How many man hours are required for additional work Inspection within 1 year (column J) ?

a. 10,000 man hours

b. 12,000 man hours

c. 13,000 man hours

d. 14,000 man hours

10. How many man hours are required for additional work Inspection within 1 year (column J) ?

a. 10,000 man hours

b. 12,000 man hours

c. 13,000 man hours

d. 14,000 man hours

11. How many man hours are required for backshop within 1 year (column K) ?

a. 5,000 man hours

b. 6,000 man hours

c. 7,000 man hours

d. 8,000 man hours

12. How many man hours are required for Support Equipment (SE) and Aerospace Ground Equipment (AGE) maintenance within 1 year (column L) ?

a. 5,000 man hours

b. 6,000 man hours

c. 7,000 man hours

d. 8,000 man hours

13. How many man hours are required for I - Level maintenance within 1 year (column M) ?

a. 46,000 man hours

b. 46,500 man hours

c. 45,000 man hours

d. 45,500 man hours

14. What is the number of optimum man power for I – Level maintenance (column O) ?

a. 46,000 / 1,446

b. 46,500 / 1,446

c. 45,000 / 1,446

d. 45,500 / 1,446

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