Table 1a Time variation of u at y=-0.5 for various values K (Ha=3, m=3, $=1)

u	t=0.2	t=0.4	t=0.6	t=0.8	t=1	t=1.2	t=1.4	t=1.6	t=1.8	t=2
K=0	0.6339	0.8327	0.8658	0.8466	0.8231	0.8080	0.8011	0.7989	0.7986	0.7989
K=0.5	0.4301	0.6455	0.7712	0.8357	0.8613	0.8641	0.8555	0.8424	0.8290	0.8176
K=1	0.3641	0.5308	0.6529	0.7389	0.7966	0.8326	0.8524	0.8607	0.8611	0.8564

Table 1b Time variation of u at y=0 for various values K (Ha=3, m=3, $=1)

u	t=0.2	t=0.4	T=0.6	t=0.8	t=1	t=1.2	t=1.4	t=1.6	t=1.8	t=2
K=0	0.8668	1.2272	1.2874	1.2527	1.2099	1.1826	1.1700	1.1659	1.1655	1.1661
K=0.5	0.6743	0.9704	1.1509	1.2479	1.2885	1.2943	1.2809	1.2592	1.2358	1.2146
K=1	0.6123	0.8352	1.0021	1.1221	1.2042	1.2563	1.2855	1.2977	1.2980	1.2903

Table 1c Time variation of u at y=0.5 for various values K (Ha=3, m=3, $=1)

u	t=0.2	t=0.4	t=0.6	t=0.8	t=1	t=1.2	t=1.4	t=1.6	t=1.8	t=2
K=0	1.0119	1.3445	1.3993	1.3678	1.3289	1.3042	1.2927	1.2890	1.2887	1.2892
K=0.5	0.8394	1.0846	1.2431	1.3356	1.3812	1.3958	1.3917	1.3779	1.3603	1.3428
K=1	0.8069	0.9822	1.1178	1.2193	1.2923	1.3420	1.3733	1.3903	1.3968	1.3957

Table 2a Time variation of w at y=-0.5 for various values K (Ha=3, m=3, $=1)

w	t=0.2	t=0.4	t=0.6	t=0.8	t=1	t=1.2	t=1.4	t=1.6	t=1.8	t=2
K=0	0.1458	0.3428	0.4741	0.5368	0.5580	0.5609	0.5584	0.5556	0.5539	0.5531
K=0.5	0.0724	0.1764	0.2820	0.3738	0.4459	0.4979	0.5326	0.5535	0.5643	0.5685
K=1	0.0503	0.1159	0.1872	0.2577	0.3232	0.3812	0.4306	0.4712	0.5034	0.5281

Table 2b Time variation of w at y=0 for various values K (Ha=3, m=3, $=1)

w	t=0.2	t=0.4	T=0.6	t=0.8	t=1	t=1.2	t=1.4	t=1.6	t=1.8	t=2
K=0	0.2281	0.5857	0.8246	0.9385	0.9769	0.9822	0.9776	0.9725	0.9694	0.9679
K=0.5	0.1200	0.2858	0.4566	0.6096	0.7347	0.8296	0.8968	0.9410	0.9676	0.9815
K=1	0.0828	0.1873	0.3007	0.4138	0.5205	0.6171	0.7015	0.7729	0.8317	0.8788

Table 2c Time variation of w at y=0.5 for various values K (Ha=3, m=3, $=1)

w	t=0.2	t=0.4	t=0.6	t=0.8	t=1	t=1.2	t=1.4	t=1.6	t=1.8	t=2
K=0	0.2471	0.5763	0.7935	0.8969	0.9319	0.9367	0.9324	0.9278	0.9250	0.9238
K=0.5	0.1153	0.2612	0.4105	0.5465	0.6609	0.7514	0.8189	0.8664	0.8979	0.9173
K=1	0.0770	0.1686	0.2664	0.3639	0.4569	0.5423	0.6186	0.6849	0.7413	0.7881

Table 3a Time variation of T at y=-0.5 for various values K (Ha=3, m=3, $=1)

T	t=0.2	t=0.4	t=0.6	t=0.8	t=1	t=1.2	t=1.4	t=1.6	t=1.8	t=2
K=0	0.0237	0.1036	0.1787	0.2295	0.2588	0.2740	0.2814	0.2849	0.2866	0.2875
K=0.5	0.0188	0.0756	0.1332	0.1816	0.2199	0.2485	0.2687	0.2819	0.2898	0.2939
K=1	0.0182	0.0673	0.1147	0.1543	0.1875	0.2150	0.2377	0.2559	0.2702	0.2809

Table 3b Time variation of T at y=0 for various values K (Ha=3, m=3, $=1)

T	t=0.2	t=0.4	t=0.6	t=0.8	t=1	t=1.2	t=1.4	t=1.6	t=1.8	t=2
K=0	0.0830	0.2244	0.3462	0.4333	0.4868	0.5160	0.5308	0.5378	0.5412	0.5429
K=0.5	0.0821	0.1954	0.2859	0.3606	0.4211	0.4682	0.5027	0.5265	0.5417	0.5503
K=1	0.0827	0.1886	0.2659	0.3267	0.3768	0.4189	0.4543	0.4834	0.5067	0.5248

Table 3c Time variation of T at y=0.5 for various values K (Ha=3, m=3, $=1)

T	t=0.2	t=0.4	t=0.6	t=0.8	t=1	t=1.2	t=1.4	t=1.6	t=1.8	t=2
K=0	0.3484	0.5012	0.6155	0.6966	0.7464	0.7736	0.7872	0.7937	0.7968	0.7983
K=0.5	0.3461	0.4741	0.5570	0.6245	0.6802	0.7243	0.7572	0.7804	0.7954	0.8041
K=1	0.3468	0.4693	0.5399	0.5936	0.6384	0.6767	0.7094	0.7366	0.7589	0.7765

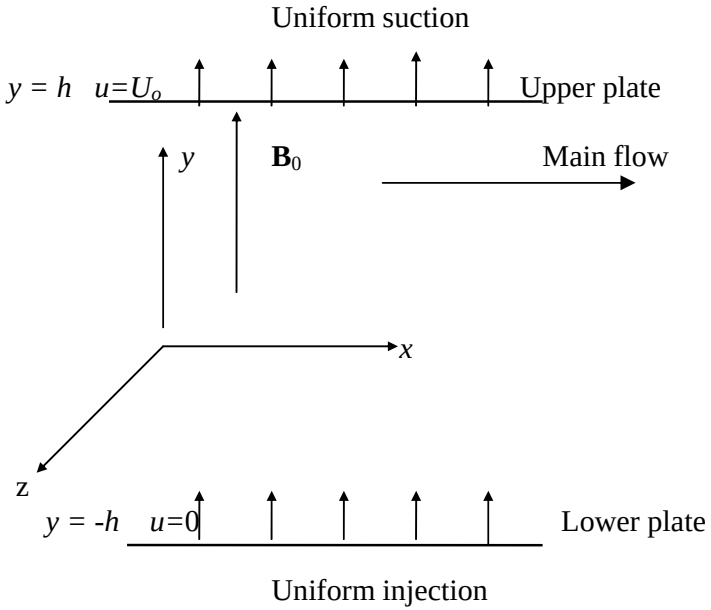
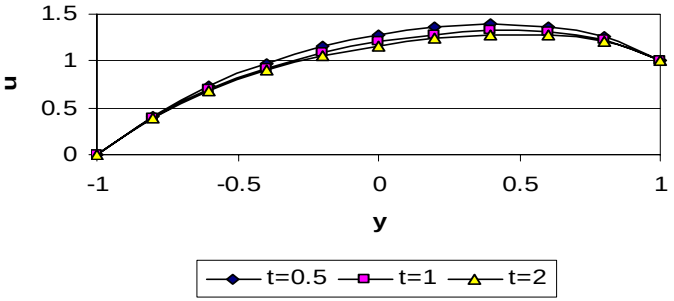
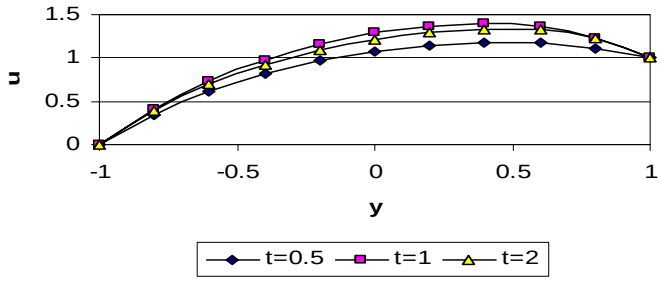


Fig. 1. The geometry of the problem



(a)



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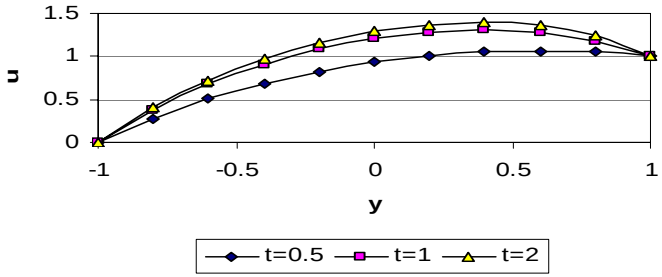
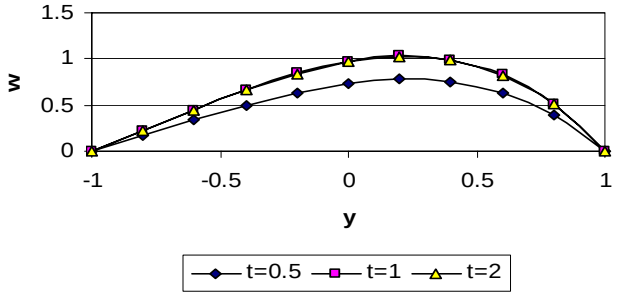
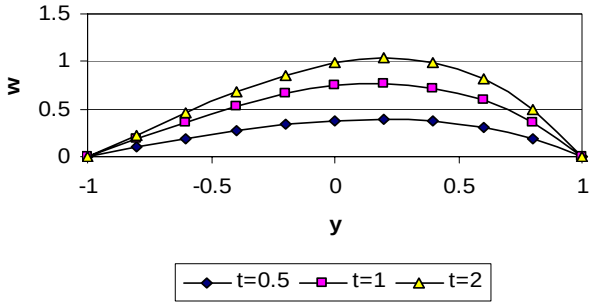


(c)

Fig. 2 Time development of the velocity component u (Ha =3, m=3, $=1)



(a)



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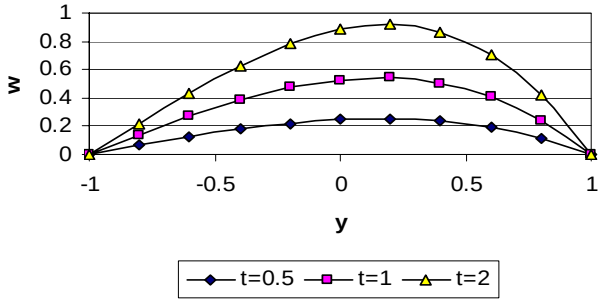
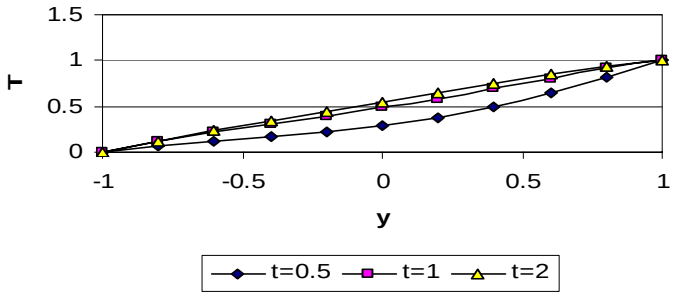
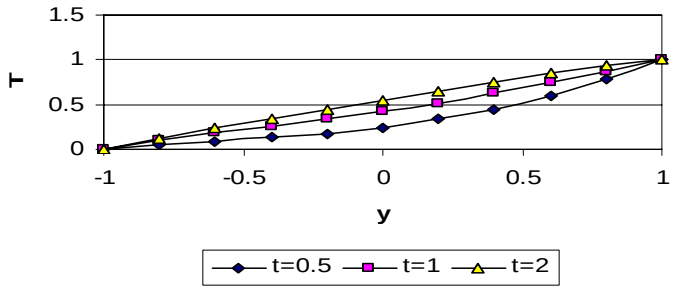


(c)

Fig. 3 Time development of the velocity component w (Ha =3, m=3, $=1)



(a)



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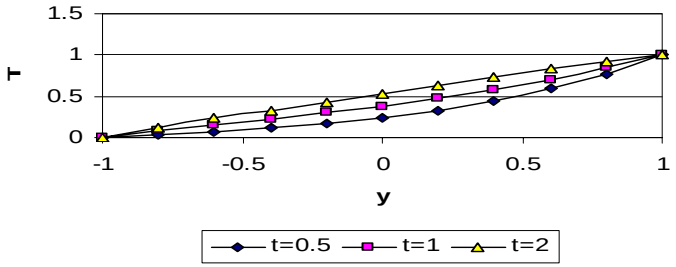
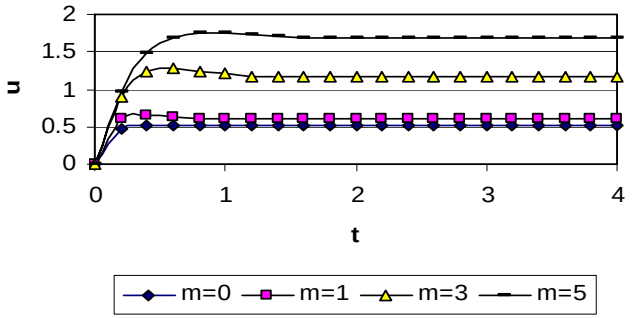
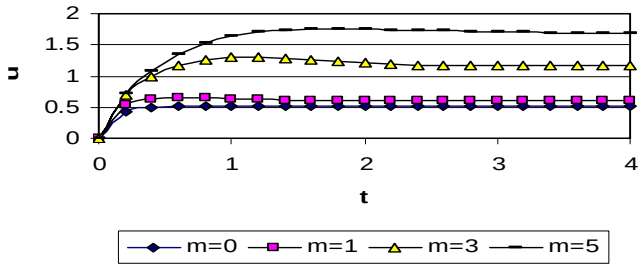


(c)

Fig. 4 Time development of the velocity component T (Ha =3, m=3, $=1)



(a)



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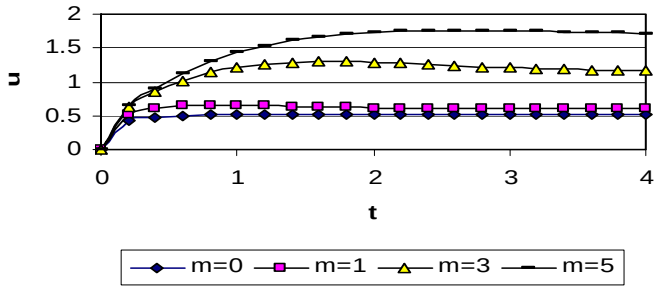
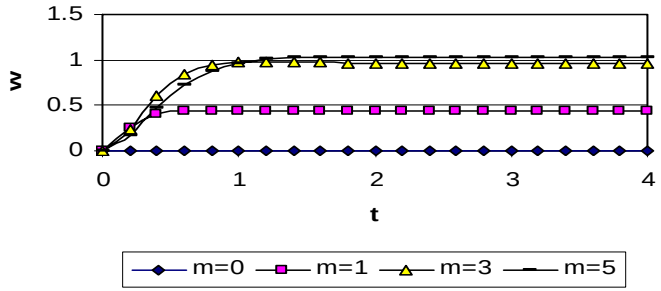


(c)

Fig. 5 Effect of the Hall parameter on the time development of u at y=0 (Ha =3, $=1)

(a)



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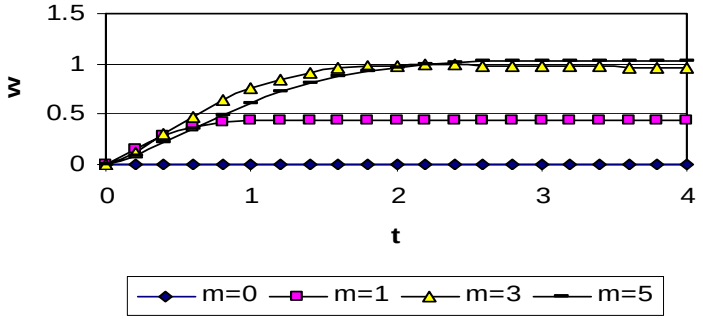


(c)

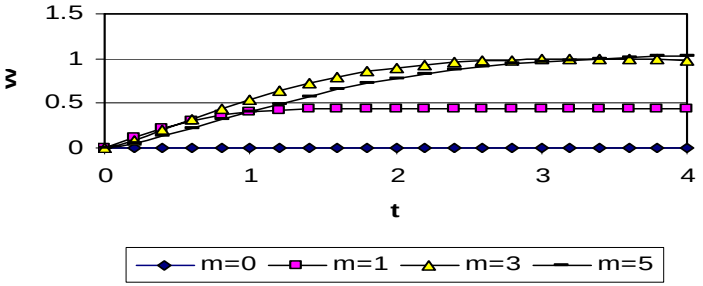
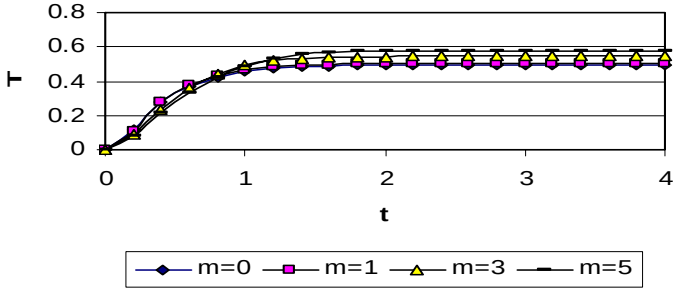


Fig. 6 Effect of the Hall parameter on the time development of w at y=0 (Ha =3, $=1)

(a)



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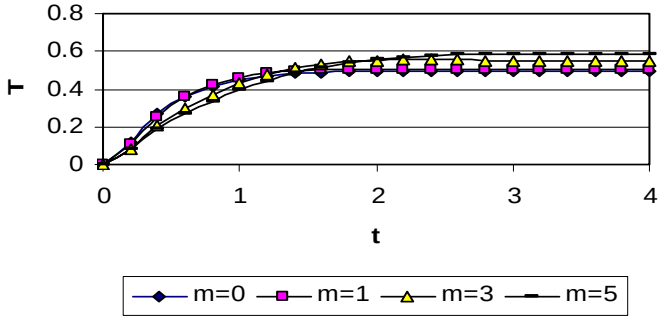


(c)

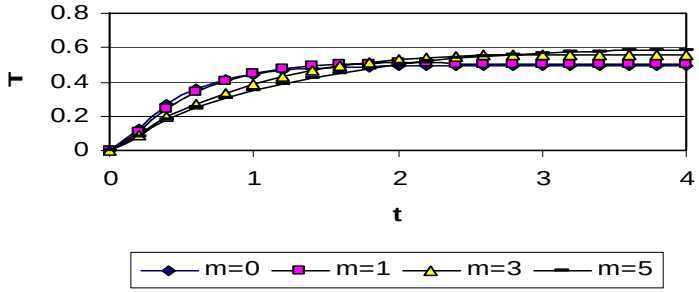
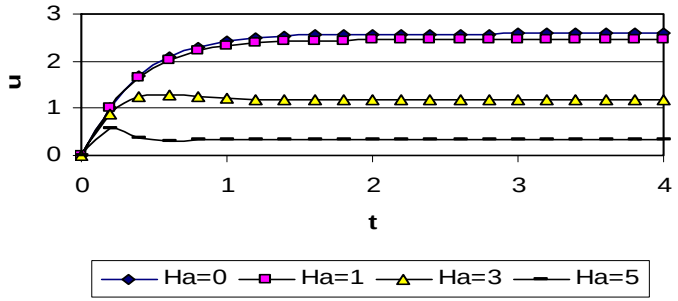
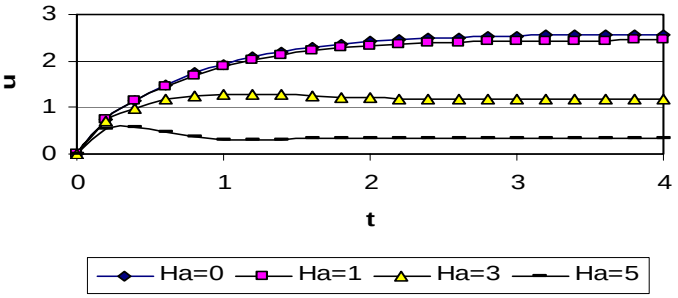


Fig. 7 Effect of the Hall parameter on the time development of T at y=0 (Ha =3, $=1)



(a)



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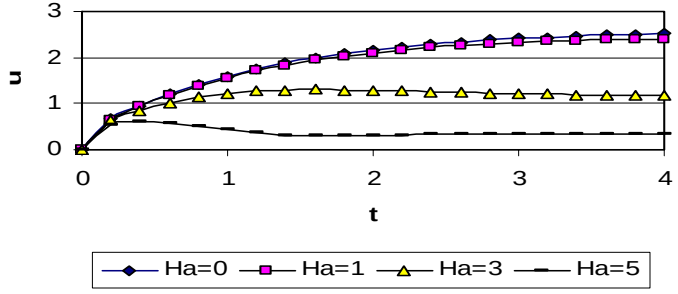
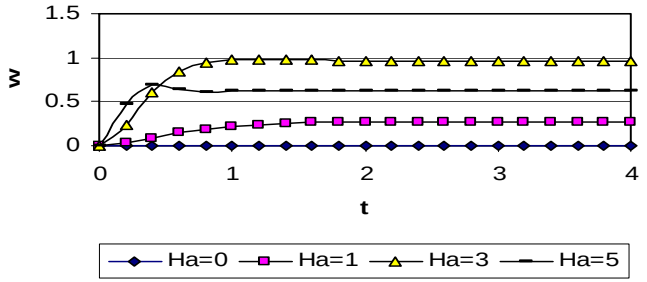
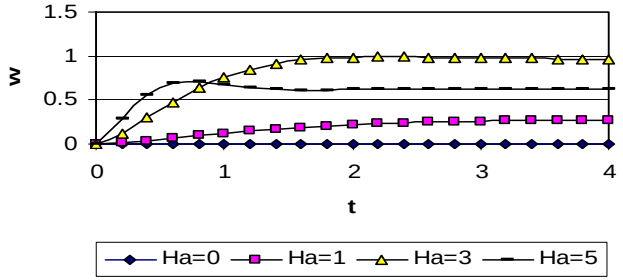


(c)

Fig. 8 Effect of the Hartmann number on the time development of u at y=0 (m=3, $=1)



(a)



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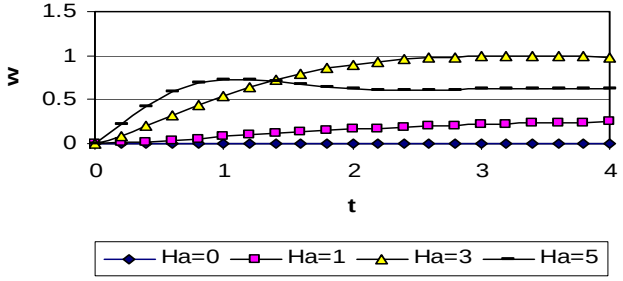
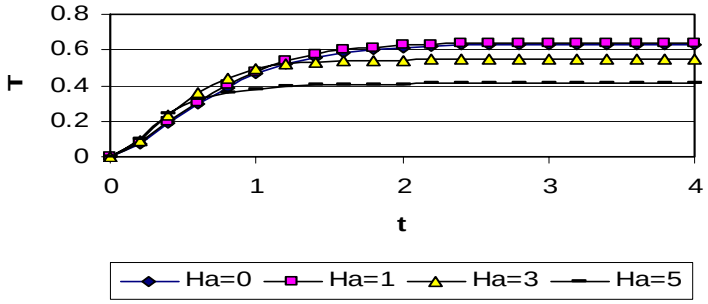
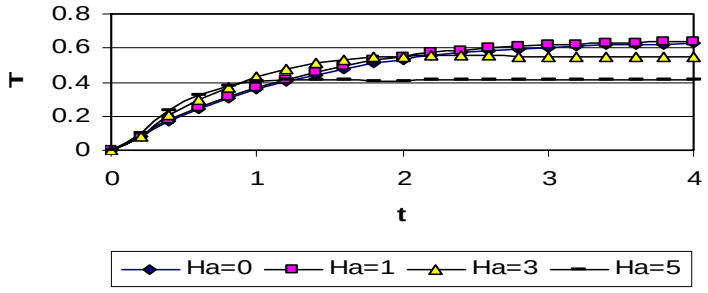


(c)

Fig. 9 Effect of the Hartmann number on the time development of w at y=0 (m=3, $=1)



(a)



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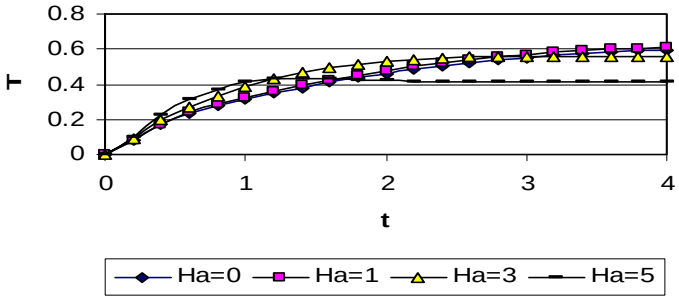
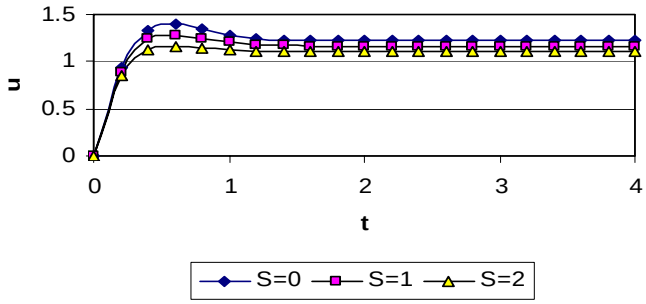
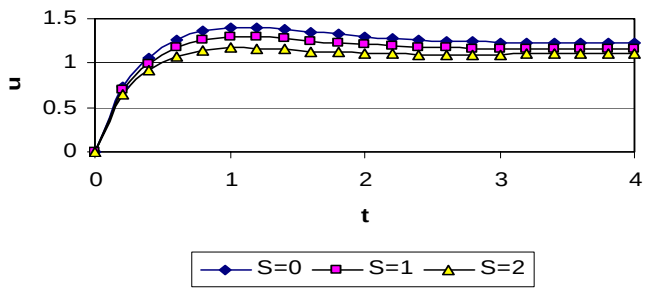


(c)

Fig. 10 Effect of the Hartmann number on the time development of T at y=0 (m=3, $=1)



(a)



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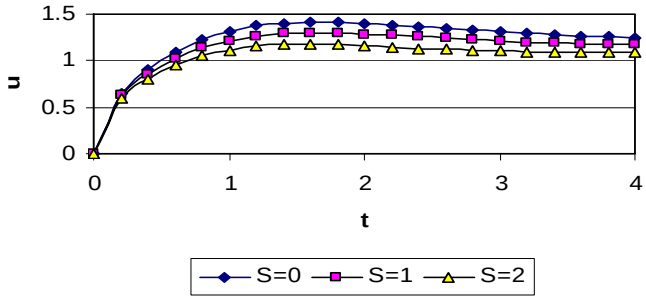
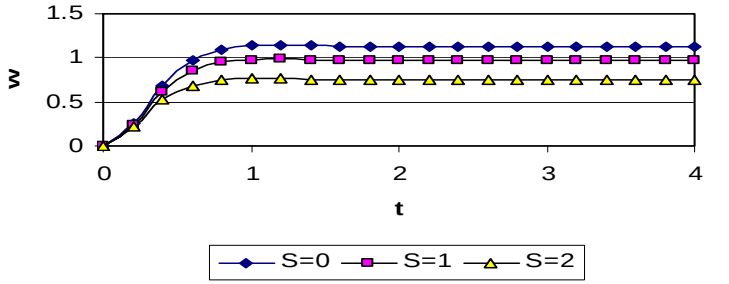
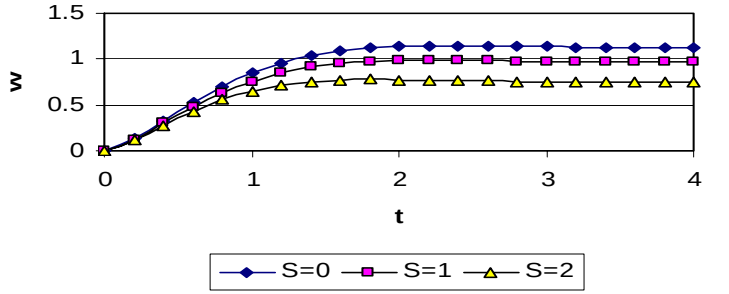


(c)

Fig. 11 Effect of the suction parameter on the time development of u at y=0 (Ha =3, m=3)



(a)



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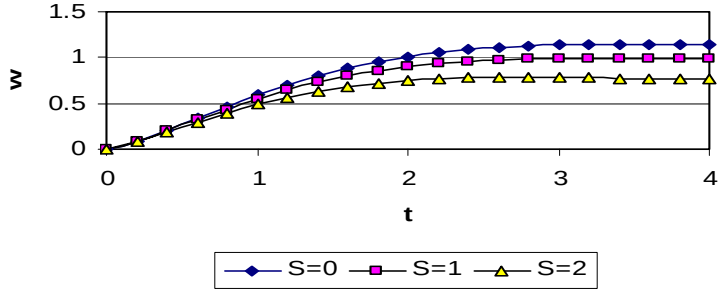
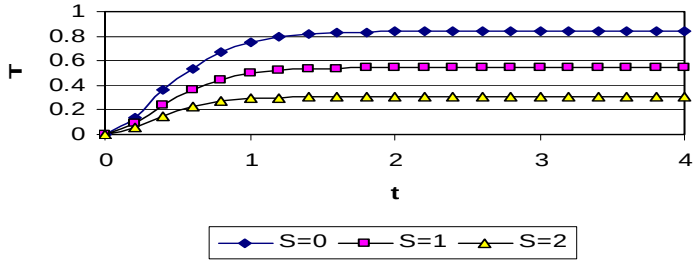
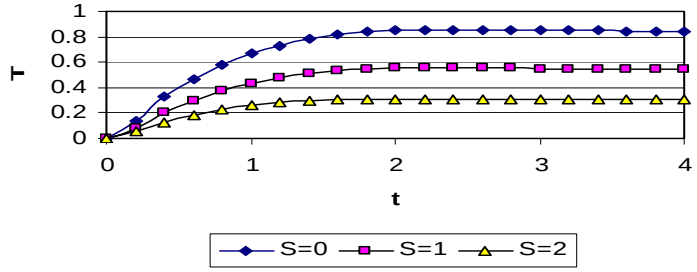


(c)

Fig. 12 Effect of the suction parameter on the time development of w at y=0 (Ha =3, m=3



(a)



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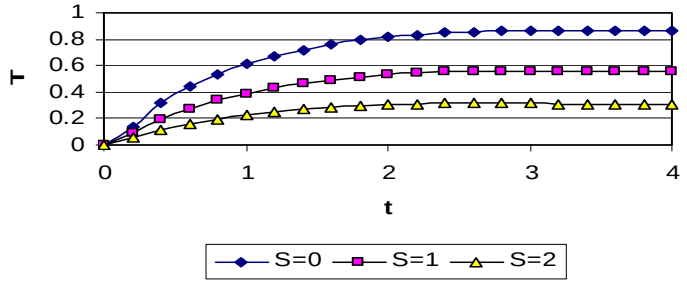

(c)

Fig. 13 Effect of the suction parameter on the time development of T at y=0 (Ha =3, m=3)